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Volume 2, Number 6

June 1964

MODEL MAIL.....	page 7
NEW TO SCALE.....	page 12
MCS CONTEST.....	page 15
WINNERS WORK WITH WOOD.....	page 18
(One of 4 Great Contests)	
TRY THE TWISTER.....	page 26
STYLING TIPS.....	page 35
FIRST REPORTS.....	page 36
REVELL'S OPEN CONTEST.....	page 38
(One of 4 Great Contests)	
TANTALIZING T-BIRD.....	page 40
TABLE TOP PHOTO CONTEST.....	page 42
(One of 4 Great Contests)	
SLOT RACING TRACK DIRECTORY.....	page 43
SLOT RACING IN THE MIDWEST.....	page 44
MOTORIZING 1/32nd FORMULA I CARS.....	page 46
TRACK TEST: SRM.....	page 48
SLOT RACERS' WORKSHOP.....	page 50
TEAM RACING.....	page 52
TRACK TALK.....	page 53
SLOT RACING CLUB AND COMMERCIAL TRACKS.....	page 54
CLUB OF THE MONTH.....	page 58
POPULAR MOTOR POSITIONS.....	page 60



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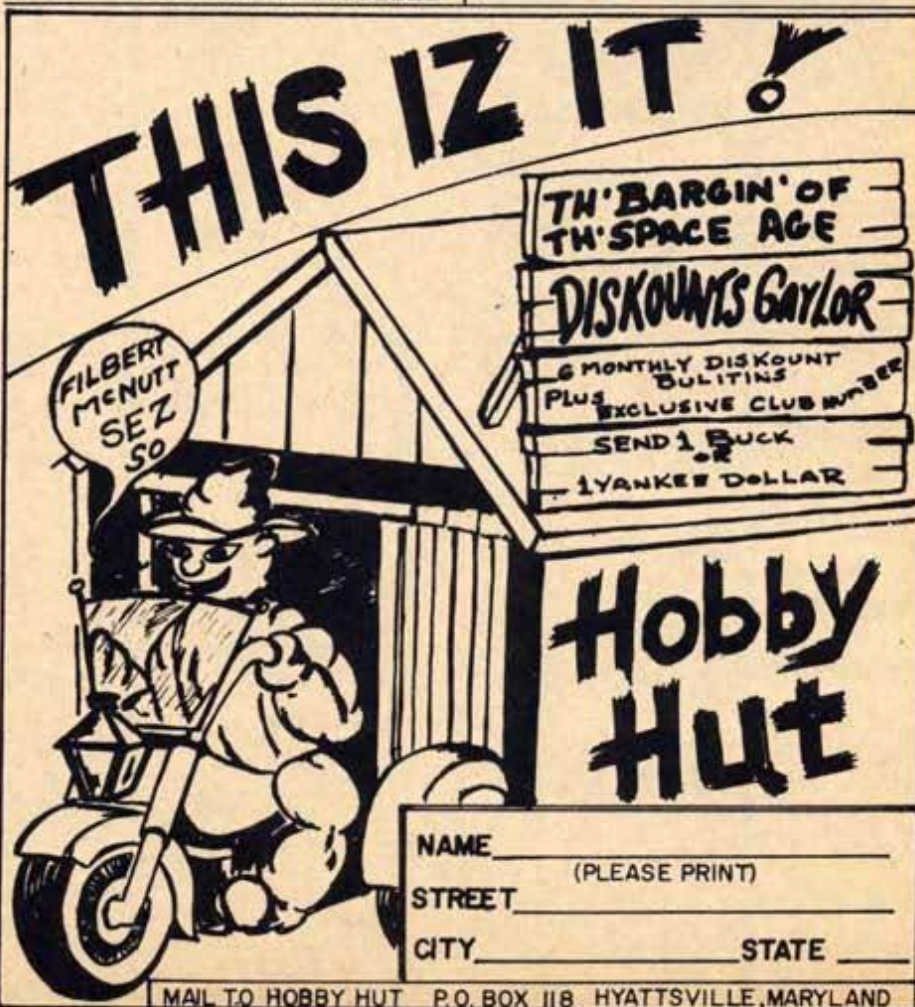
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MODEL MAIL

Planning A Club

I am planning on starting a Model Car Club. Could you if possible give me some tips on how to start one, what the dues should be, etc?

When I get the club together we are going to buy enough straight (9 inch) track to make a scale 1/4 mile drag strip, (for H.O.) Could you tell me how long a scale 1/4 mile for H.O. is? How many feet for shut down?

Jim Adkins
Libertyville, Ill.

Some very good tips on starting a club are expressed in an article in M.C.S. Feb. '64. Your dues should depend upon your club's aims, what things you wish to purchase and in what time period. Your dues could go up or down depending upon your expenses. Formulate a plan as to what you as a club wish to accomplish and in what time, find out what it will cost you and then determine what your dues should be to have the required money available when you need it.

Simple arithmetic will answer your questions on scale distances. H. O. scale is 1/87th of actual size or 1/87th of 1320 feet which equals 1/4 mile. This works out to 15.17 feet in H.O. scale. Your Aurora straights are 9 inches long so it will take 20 1/4 of these to equal your 1/4 mile strip. Shut down area need be only a few feet if proper cushioning to stop cars is used.

Wiring Lights

I am making working head lights. How do I hook up the wires to the battery? On my doors I cut them out but how do I cut the interior?

Bob Hall
Flint, Mich.

To complete your electric circuit on working headlights, all that is required is that one lead from each light be attached to the bottom of the battery and the other to the top. Generally, the two wires from each light are routed to some convenient spot and there joined into pairs where one lead from each light is joined to another wire forming a "Y." Do the same with the other two leads and then run the single wires to the battery. Attach one to the base and the other to the top of the battery. The switch can be placed anywhere in the circuit that will make mounting convenient. See the article on working lights in Oct. '63 M.C.S.

From your question, I would assume
Continued on page 10

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Model Mail

Continued from page 7

you have one of the A.M.T. kits with the single piece interior that looks like an upholstered bathtub, if so, line it up with the body section and mark the door opening on the interior. Remove and cut out the door panel area with an auto cutter or Zona saw, use scrap sheet plastic to space interior panel with outside door. Check fit with door installed and trim spacers until inside panel will line up with the rest of the interior section.

Dead Spot On Track Section

Every time my inside slot racer goes over one special section of track, it stops. I pick it up and put it on the next section of track and it goes great. Why does it stop?

Willie Diecrmann
Edwardsburg, Mich.

Your problem is poor connections between track sections. Your inside lane has one section of track that is not making contact at either end, causing the dead spot. Remove this section of track, clean all contact points on this section as well as the adjacent ones. If this does not do it, pry or bend connectors a little so they will fit tighter when assembled and provide proper electrical contact.

Paint Fogging & Metalflake

Please explain the term "paint fogging" and how this effect can be used in painting my car.

Jim Sawchuk
Palo, Pa.

How was the "fogging" on the '49 Merc and '36 Ford in the Jan. issue accomplished?

Chuck Jurvelin
Esko, Minn.

I have been having trouble trying to paint a metalflake job. I tried before but had to repaint the color solid. I would also like to know what sort of gold paint to buy that would do the best metalflake job?

John Huschik
Bellwood, Ill.

The term fogging, as applied to model painting, refers to the method as well as

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the amount of paint applied at any one time to the model. The directions supplied on any spray can, if followed should result in what is called a wet coat. The controlling factors are: the distance from can to object and the speed in which the surface is covered. A pass too close or too slow will deposit an excess of paint with a good chance of runs and sags forming. The opposite: too fast a pass or being too far away will result in spotty coverage or orange peel.

Fogging is used to obtain a different result than normal painting will produce. As an example: Candy apple colors are usually applied over one of the three base colors, then the chosen candy color top coat is sprayed over the base color. But what if we want something different, say a blend of colors or perhaps a metal flake finish? This is where fogging enters the picture. To do this, we disregard painting instructions. What we are after is a widely disposed deposit of small droplets and the proper technique can only be mastered by trial and error experimentation. Do not spray directly at the model, rather point the spray can above and about double the distance away required for normal painting. This will allow the paint particles to disperse into a large area somewhat like a fog, then settle on the model. Keep the model in motion to prevent excessive build up on any one section. Some wild new color combinations become available using this approach. Try some combinations of Candys over a gold base and perhaps a fog coat of bronze before the finish coat. There is no end to the combinations available. So have fun, be brave and try some.

Mixing Cars???

I have an Aurora racing set and am wondering if I buy another type of car, will it race or even run on this track?

Jim Friedman

If you have the Aurora Thunderjet 500 set, any of the following will perform on your track: Marks, Atlas, Tyco, Gilbert and Pennline. Do not try to run any of the above cars on an AC transformer. It is sudden death for a D.C. type motor.

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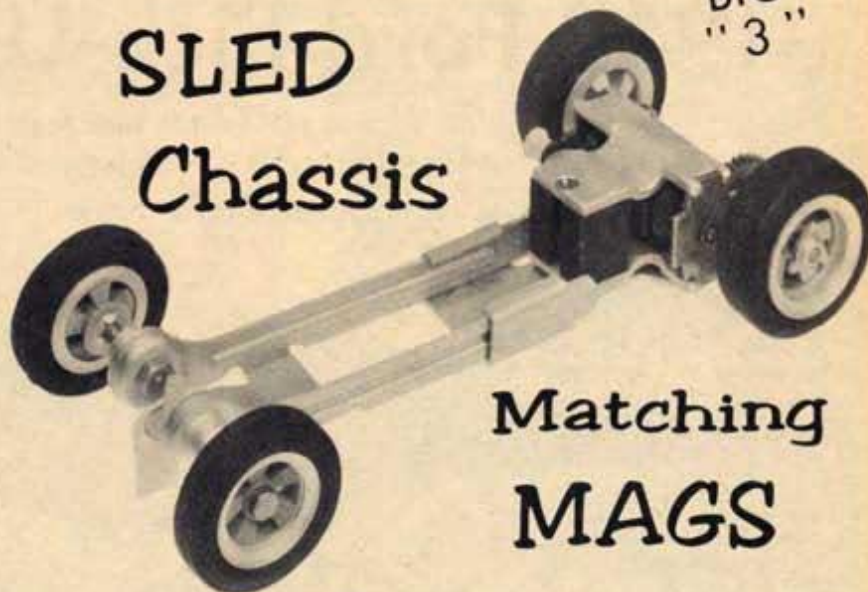


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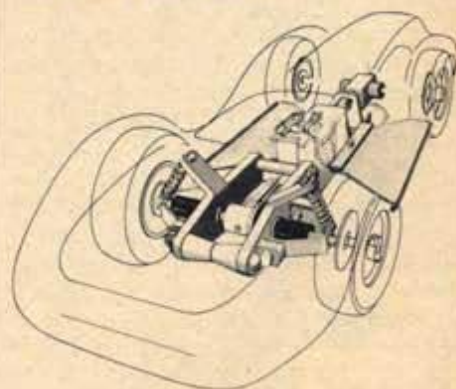
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HOBBY KITS

NEW TO



While the items usually selected for use on this page are normally products new to the world of slot racing, we occasionally run across one that while intended for display will find its way into table topping. This is the first '64 Sting Ray fastback coupe to be released, and while some others in the works are re-hashed '63's with the rear window divider merely removed, the 1/25th gem is truly a '64 (as evidenced by rear ventilators and hood minus the earlier trim inserts). Also new is the firm which is producing the StingRay (with other equally fine cars coming up shortly). It is the Model Products Corporation, of Mt. Clemens, Mich., which is abbreviated down to MPC. Best news is the low \$1.49 price tag the 'Vette will carry, a lower price than other forthcoming 'Rays will have yet with equal or better molding quality. Watch for MPC's new bid into the modeling world at your hobby store, or drop the firm a note at 360 Hubbard St., in Mt. Clemens if your dealer isn't familiar with this growing company.



Ulrich Model Kits enters the slot racing chassis field with an entirely new system of independent rear suspension, using real universal joints and coil springs. The kit utilizes aluminum castings with brass stampings and includes a body mounting bracket. Assembly requires just three screws. Tired of trying to run on lumpy tracks with rigid chassis? Try this new Ulrich unit; priced at only \$3.98 at all leading hobby stores.



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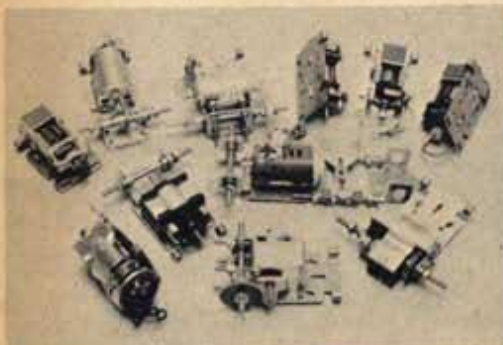
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- QUALITY MANUFACTURER OF TIRES, WHEELS, CHASSIS AND ACCESSORIES

SCALE



The forward thinking Kal-Kar people, at 14424 Oxnard Street in Van Nuys, Calif., now have motor brackets to receive virtually all makes of powerplants (see illustration) to be used with their fully adjustable chassis. All frame parts are brass stampings to ease soldering chores if a special application on the part of the builder requires it. The universal mounts provide nearly any car and any motor to have the lowest possible center of gravity. Front wheels float on the Kal-Kar chassis to assure wheels-on-track stance under all surface conditions.



CorBen Model Car Racing Equipment track tests all of their products to assure prospective purchasers their highest expectations will be met. Each chassis made by the firm has been specifically designed for racing and are not merely devices for spacing axles or retaining motors. Various available chassis will receive Kemtron motors as well as many Pittmans and some others. CorBen's fine racing wheels are entirely machined for perfect concentricity and are finished off by hand polishing. Also new from this company are high tensile axles, oil impregnated bearings and an applicator tube of a specially compounded lubricant. For full information on any or all of these items, write the firm at Harris Engineering Co., Santa Monica, Calif.

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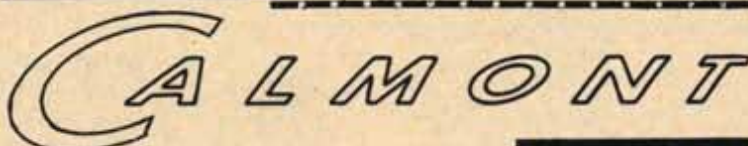
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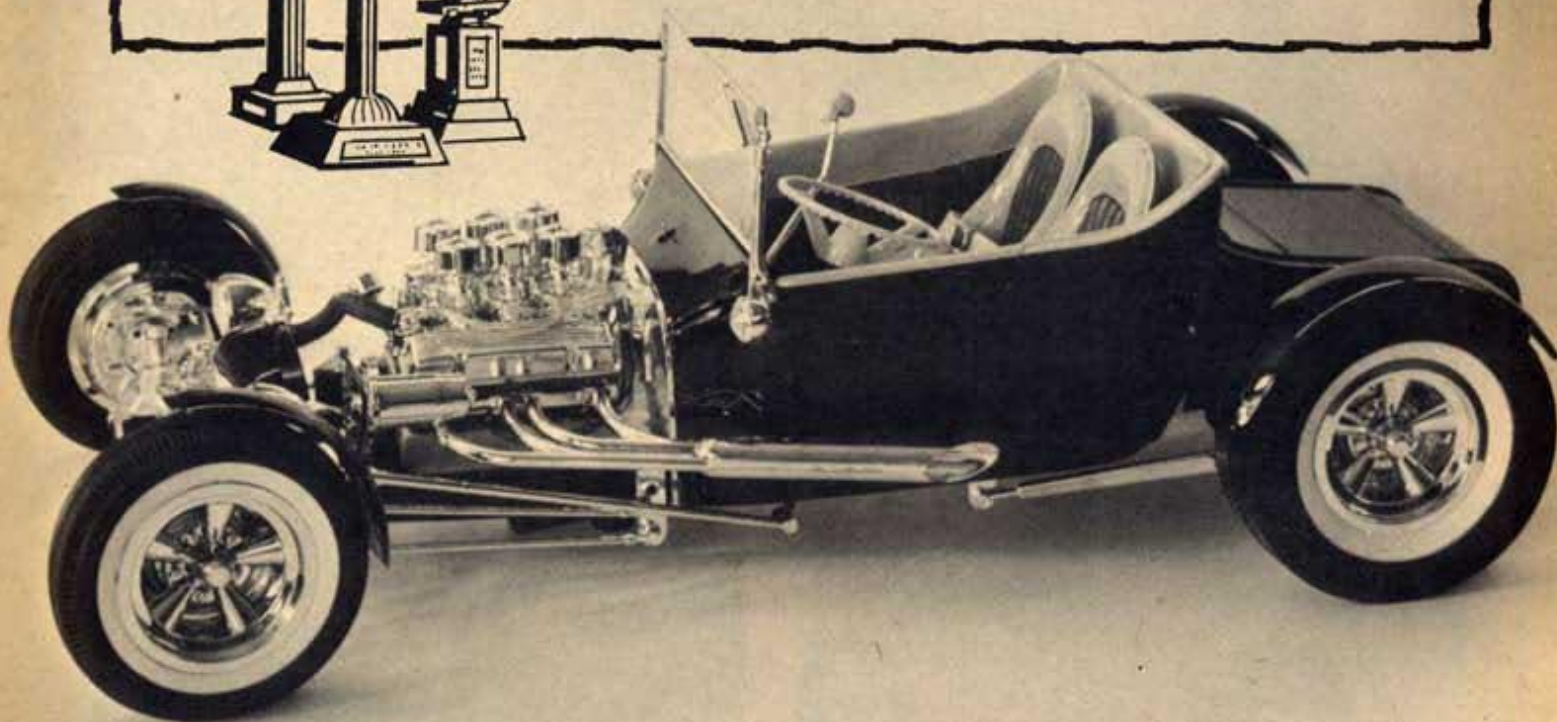
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MCS

CONTEST WINNERS



Trophy winner this month is Paul H. Ennis, Rt. 4, Greensburg, Kentucky, who started with a Big Rod by Monogram, discarded the bench seat and installed buckets with nylon seat belts. Paul chopped the windshield, added Mag wheels all around and fenders from the Big Tub. It is painted jet black with red and yellow upholstery. Spark plugs were scratch built.



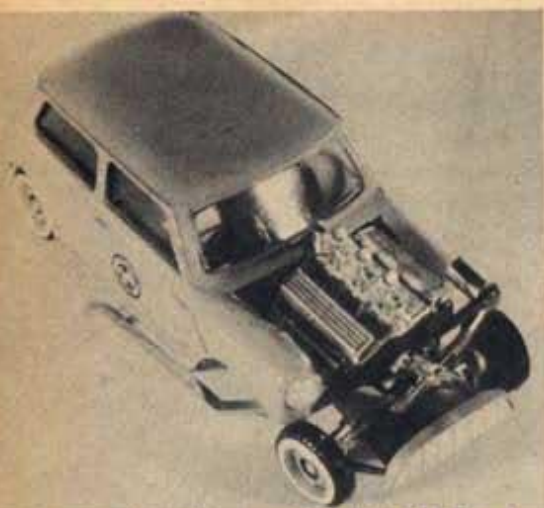
Paul Luke, Jr., from Chicago, Ill., spent three months detailing this '32 Ford. Car features a blown Chevy engine, rollbar cage, slicks taped together. Engine is wired and exhausts are made of aluminum and '32 pipes.

Here's one Las Vegas modeler that didn't gamble. This '40 Ford coupe has a molded grille and frenched headlights. Body has been molded to fenders and taillight housings were molded to rear fender. Builder is Robert E. Ramos.



This AMT '64 Stingray roadster turned hardtop has a ram-tube injected 'Vette wired and detailed, surrounded by a copper colored engine compartment. Built by David P. Andrews, from Reading, Pa., the car has a huge rear window in the fast-back roof. Front and rear ends are restyled. Exterior is wild cherry.





Australian modeler, Keith R. Frank started with Airfix's Morris 850 kit, added Monogram's engine and exhaust pipes from the Black Widow kit.



An old friend of MCS, Sheldon Cousins, from Toledo, Ohio, sends us his newest creation. It started out as a '63 Vette convert. Shel added a Revell Turbine (fully detailed), and a radically customized interior and exterior. Undercarriage is also fully detailed.



From Grosse Pt. Farms, Mich., Bruce Merrell sends his drag strip "T." A 392 Chrysler provides the juice to this "Sanitary T."



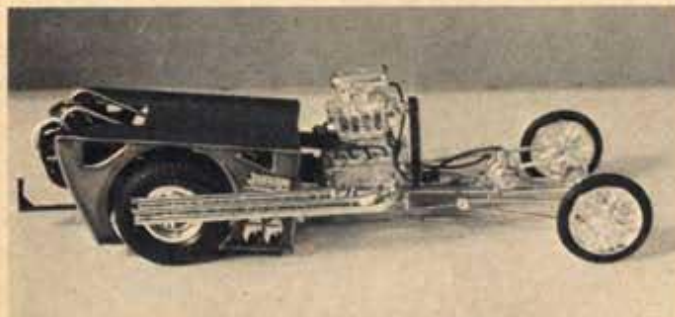
This chopped '32 Ford coupe is equipped with a '58 blown Chrysler and sports all required safety equipment. Builder is Keith Uren.



Canadian modeler, Fred Solylo, removed old soft top from a '36 Ford and replaced it with a slanted '62 Merc roof. Body has been sectioned and channeled. Fifteen coats of Candy red lacquer, rubber and waxed, top it off.



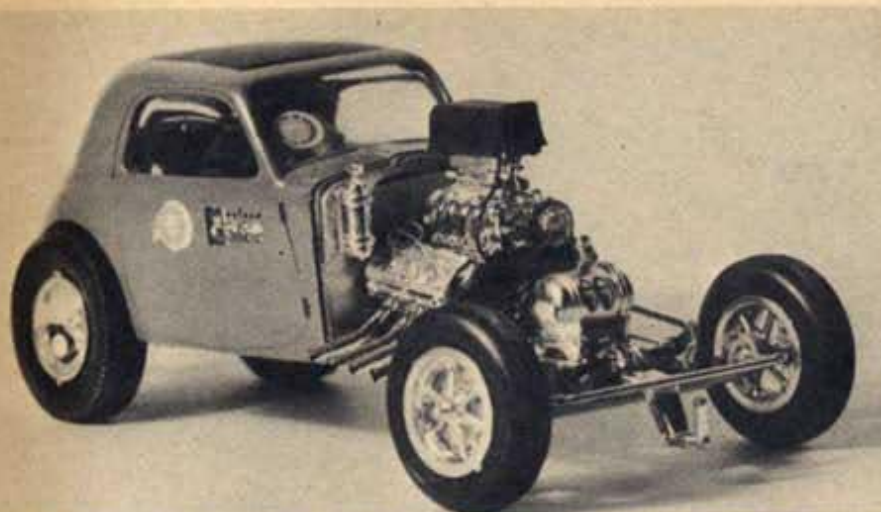
Tom Plumeri's dream dragster "Topsy" is a '62 XK-E with a blown Chrysler 413 that is fully detailed. Tom lives in Yardley, Penna., and the "Topsy" has taken top prize in the only other contest it entered.



Ten coats of clear lacquer cover the Candy Lime green on Don Taliaferro's dragster. Don used a 413 Chrysler (wired) power plant. Most of the other accessories are Revell's.

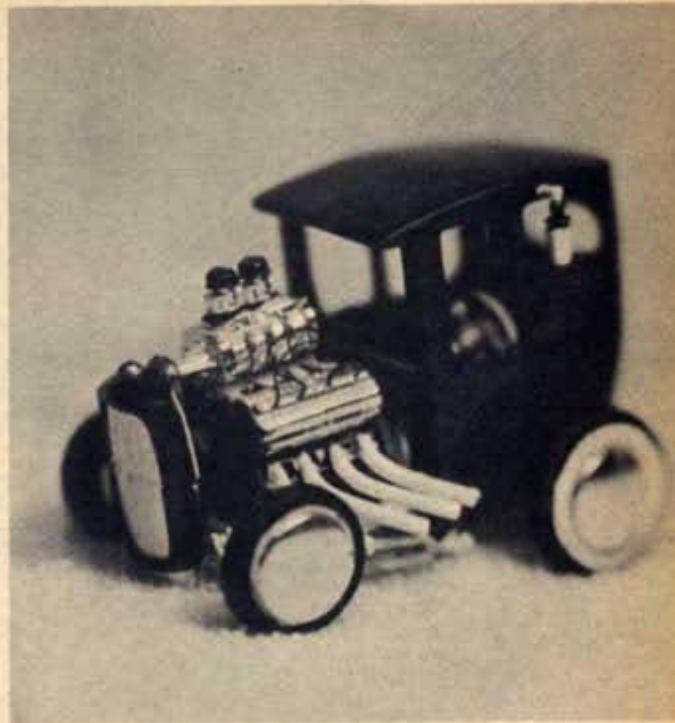


Ricky Kase puttied in the front of this '40 Ford with Ala Cart headlights and added '50 Ford bumpers. Top has been chopped and the mill is a '58 Chrysler, fully wired.



Clark Bain from Rexdale, Ontario, Canada, used 25 coats of Mandarin Red on five coats of gold undercoat to finish this modified Fiat coupe. Tack, chute and '58 Chrysler mill are all wired.

From LeTourneau College in Longview, Texas, Jack Nyland sends us his "Little Rod," complete with the original side lanterns.



SPECIAL EDITOR'S AWARD FOR OUTSTANDING CRAFTSMANSHIP

Built in Poland by Nad H. Psastowski, this car was selected for the Special Editor's Award for superior detailing. Considering the fact that model car entries from behind the Iron Curtain are not too plentiful, it was quite a treat to see this "Polish Ford."

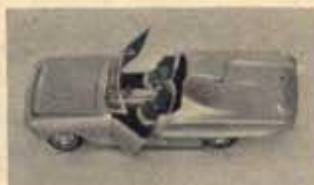
a MODEL CAR SCIENCE Contest

FOR MODELERS
EVERYWHERE . . .



Each month the editors of MCS will select, from black and white photos submitted, the top model car. It will be shown on these pages and its owner will receive a beautifully engraved trophy.

SEND A PHOTO OF YOUR PRIZE MODEL TODAY TO:



MODEL CAR SCIENCE

Contest Editor

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You may submit as many entries as you wish. Send photos only, please. NO KITS. Include your name, address, age and information on how you built the model. Only CAR models are eligible. We cannot return any photos submitted.



WITH IMAGINATIONS APLENTY, thousands of boys, ages 11 through 20 are now working creatively and skillfully to design and build futuristic-looking miniature "dream cars" for the annual Fisher Body Craftsman's Guild model car competition. The incentive for these teenage craftsmen is \$117,000 in awards, including \$38,000 in university scholarships.

About 90 per cent of the contestants carve their entries out of wood, using either a single piece or a block of laminated layers of wood. Wood used is usually of the type that predominates in the boy's section of the country: redwood in California, cypress in the South, pine in Maine, etc. Some cars are also made of plastic.

There are several types of wood with a smooth, close grain that are recommended for your model car. Northern White Pine and Sugar Pine — 1st and 2nd grade clear and grade C select that are free of knots — are ideal for model building purposes. Poplar and Basswood are also considered to be excellent carving woods.

Coarse, rough grain woods have a tendency to splinter easily while carving details. Conversely, extremely soft woods are more difficult, for they crush when pressure is applied to cut across the grain. This is especially true of balsa wood, which is very difficult to fill and seal.

When selecting your wood, try to obtain pieces that have been kiln dried. Wood that has not been properly dried will tend to split and warp under changing atmospheric conditions.

A solid block of wood is ideal for building your model. However, kiln dried wood will rarely exceed a three inch thickness. You solve this problem by laminating several pieces of the selected wood, thus forming a block.

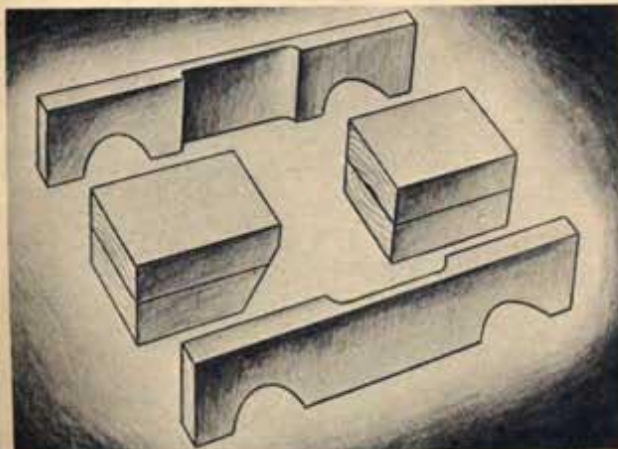
Remember, the best guarantee to effective wood working is sharp tools.

WINNERS WORK WITH WOOD

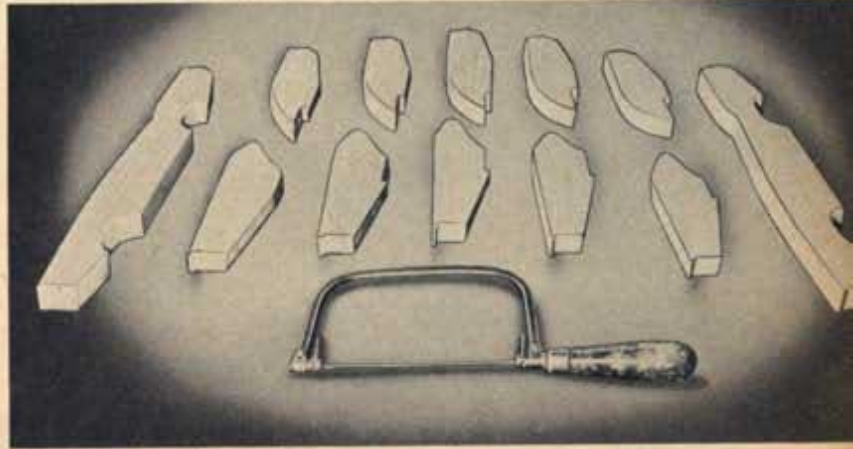
HERE'S HOW THE PROS TURN A PIECE OF WOOD INTO A WORK OF ART

BY STEPHEN D. URETTE

FOR CONVERTIBLES



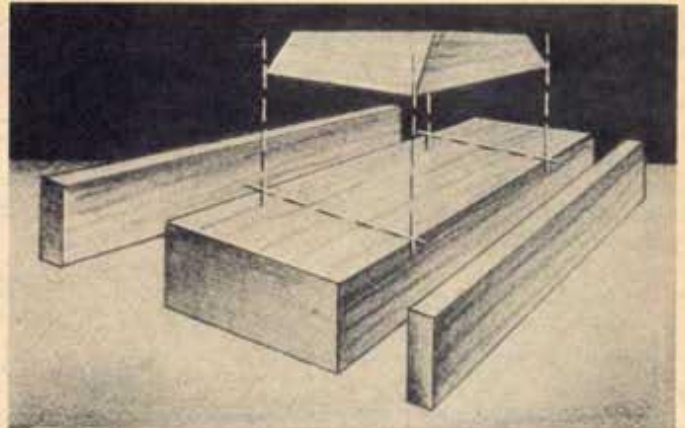
This method shows how several pieces of wood may be shaped and glued to provide a ready made passenger compartment and wheel openings for a convertible.



The side design template is used to properly cut several pieces of wood prior to lamination. Passenger area has been removed from inner pieces; wheel openings from the outer pieces.

FOR HARD TOP AND CLOSED MODELS

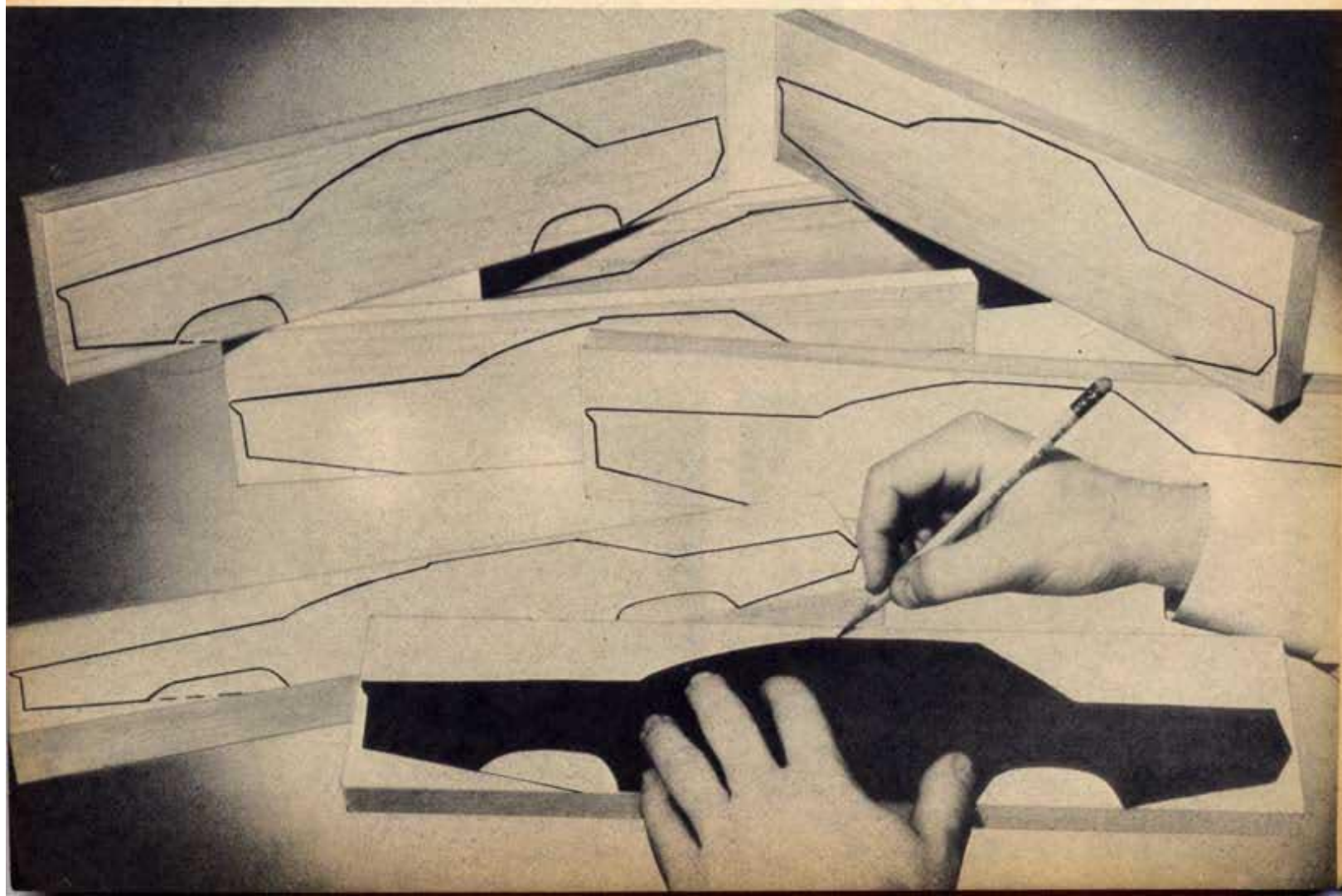
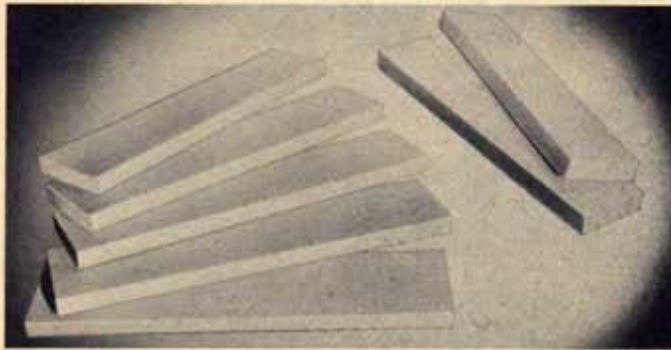
Pieces are glued together to form a block. Insure that all surfaces are sanded smooth for a close fit.

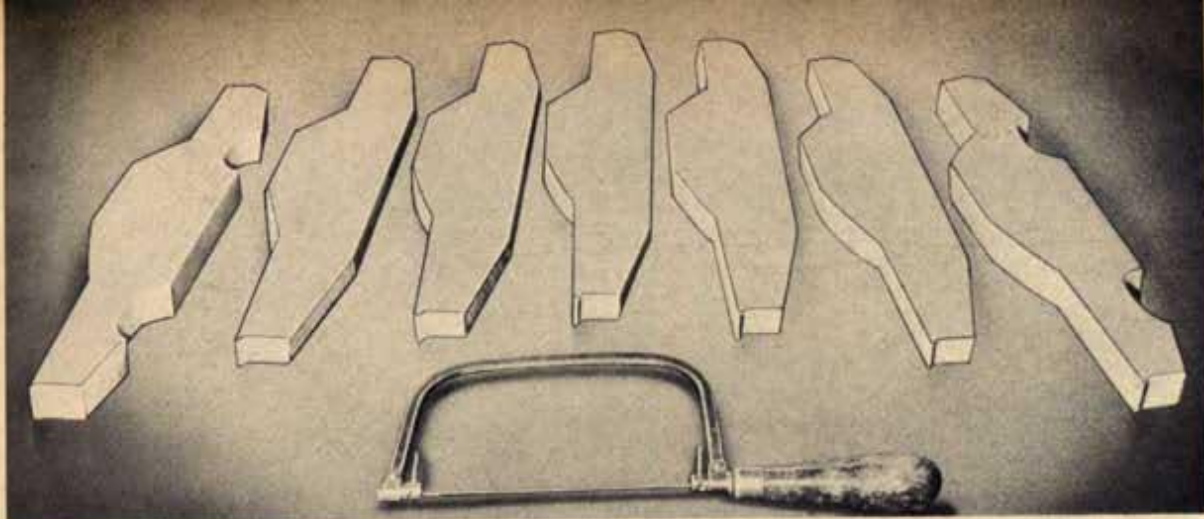


Glue a top and two side pieces to a 2" x 4". Cut wheel wells from the side boards before gluing.

Use pieces of the same type of wood and assemble them so the grain is uniform and running in the same direction, or it will be difficult to produce in a smooth, even finish.

Make a pattern from your design drawing, and trace the side view on all the pieces of wood. Cut-outs for the wheels should be marked on the outside pieces.





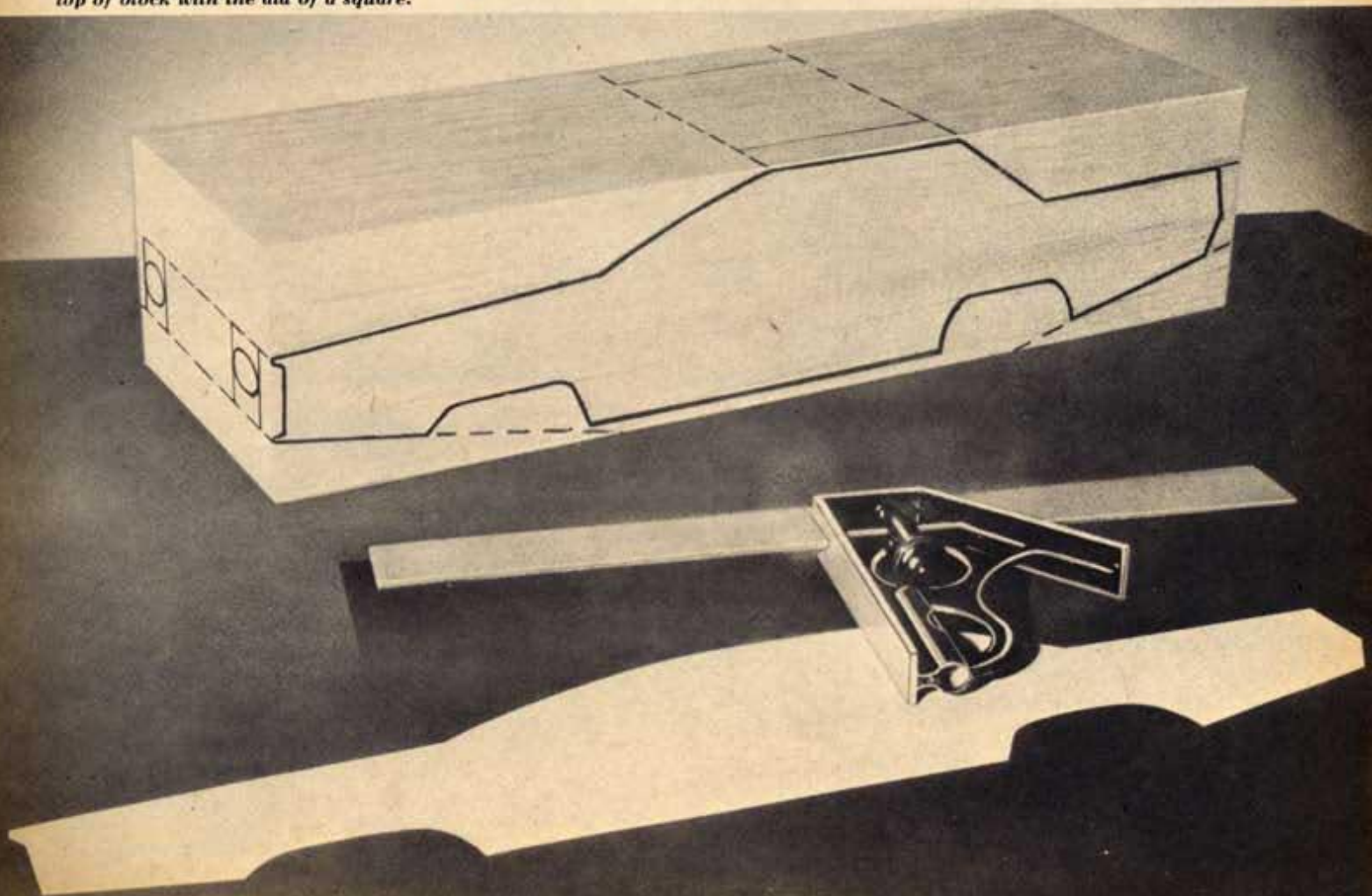
A coping saw is best suited for cutting the outline and wheel openings of the individual pieces.

Apply an all-purpose cement and use C-clamps to bond the wood into one solid block.

Position the C-clamps over two scrap wood pieces in a manner that will provide a uniform pressure and will prevent indentations from being formed in the wood.

However, if a block of wood, up to 18-3/4" long, 5" high and 7" wide is obtainable, your model can be started in this manner.

Use a template to outline side design of the model on the wood. Then project contour lines across top of block with the aid of a square.

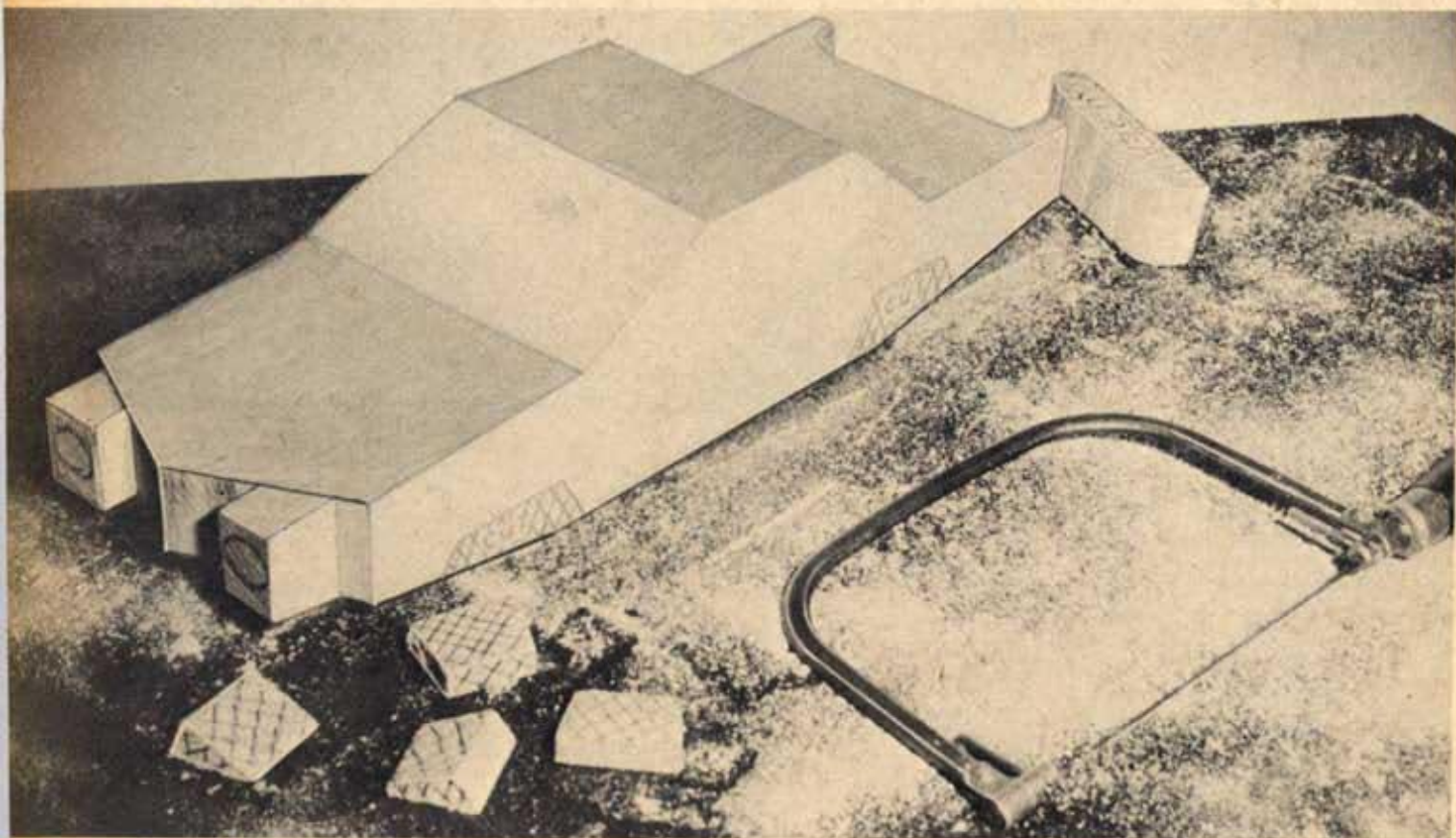




A hand saw is used to cut the block into the rough shape of the design. Follow closely and carefully the outline of the wood block.



After finishing the general outline, mark and remove remaining excess areas with a coping saw.

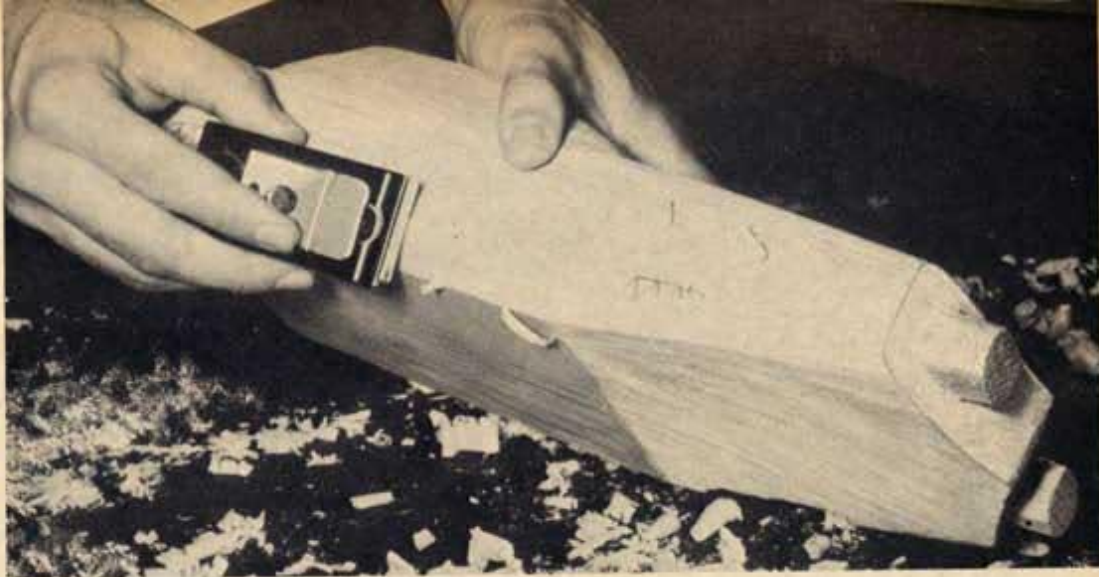


The model is now in its rough shape and ready for the more critical wood-working.

Further shaping of the model begins with working the wood down to the rough contour. A small plane or adjustable spoke shaver is used to remove the excess wood from the sides of the passenger compartment and roof area.



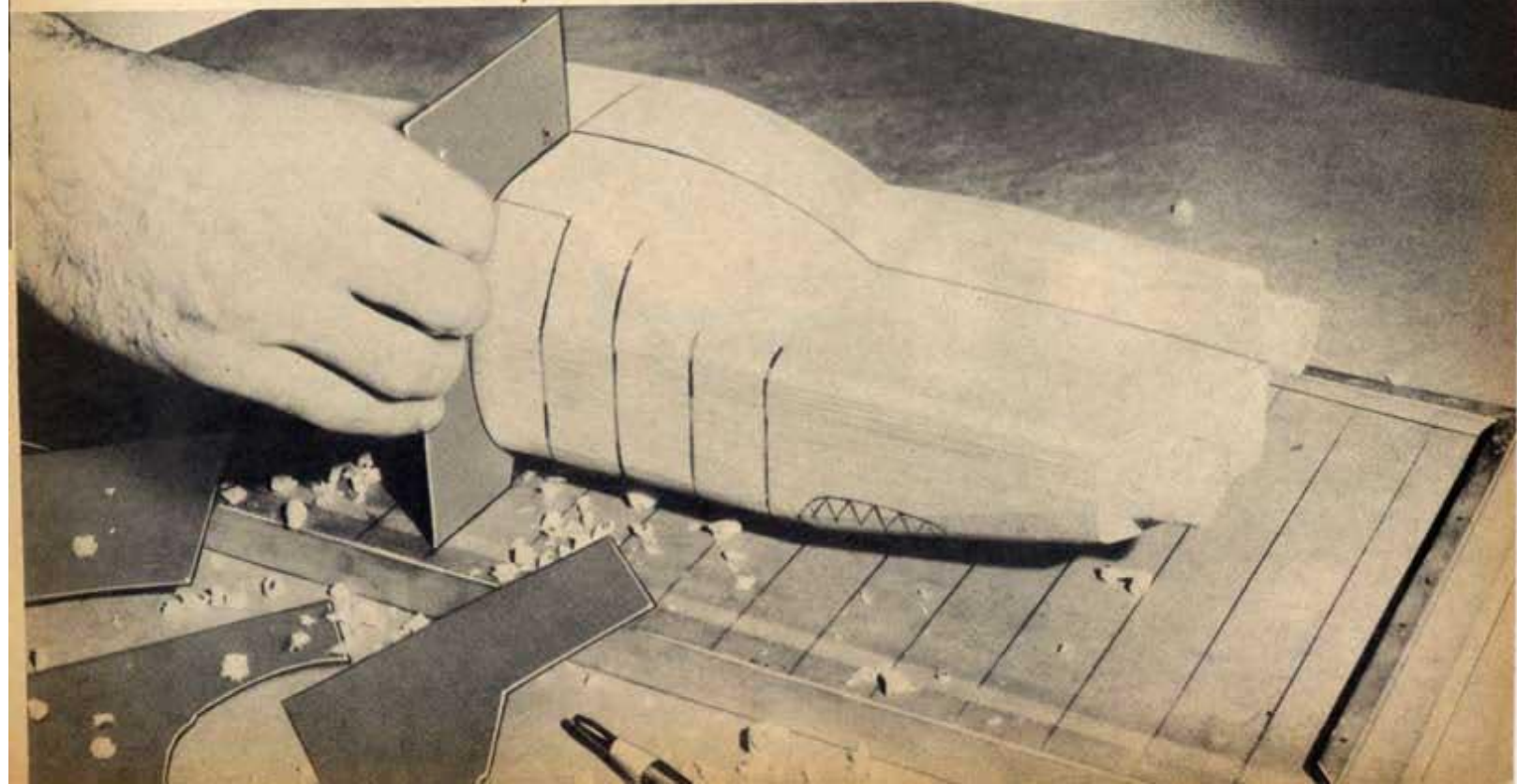
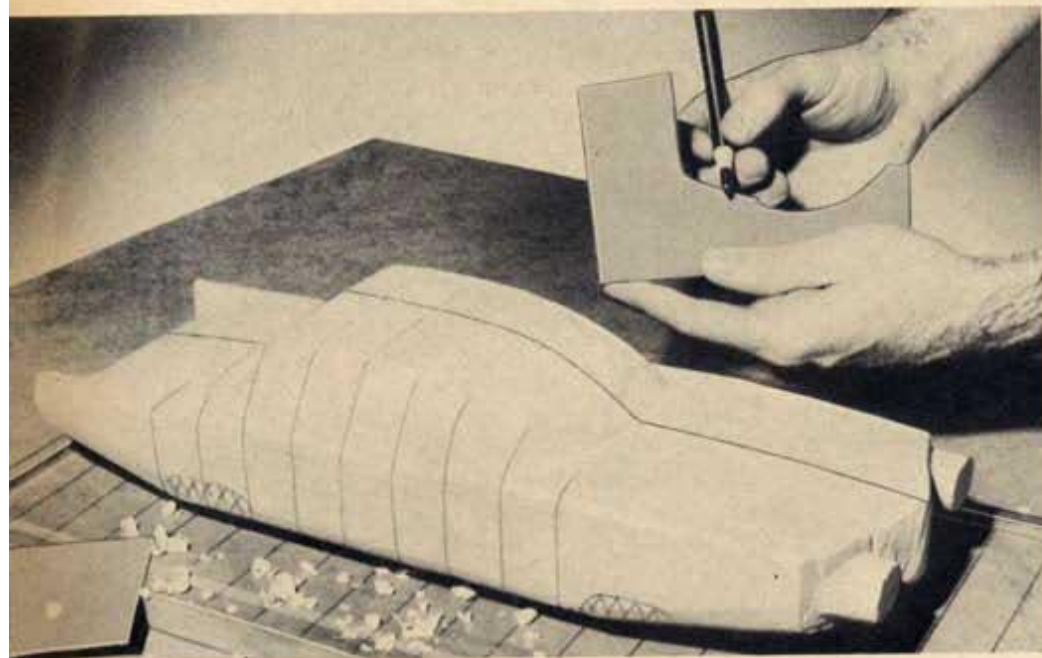
In like manner, the plane is used to roughly shape the side and fender contours. Care must be taken at this point because if too much is removed from one side, the finished model will not be perfectly symmetrical.

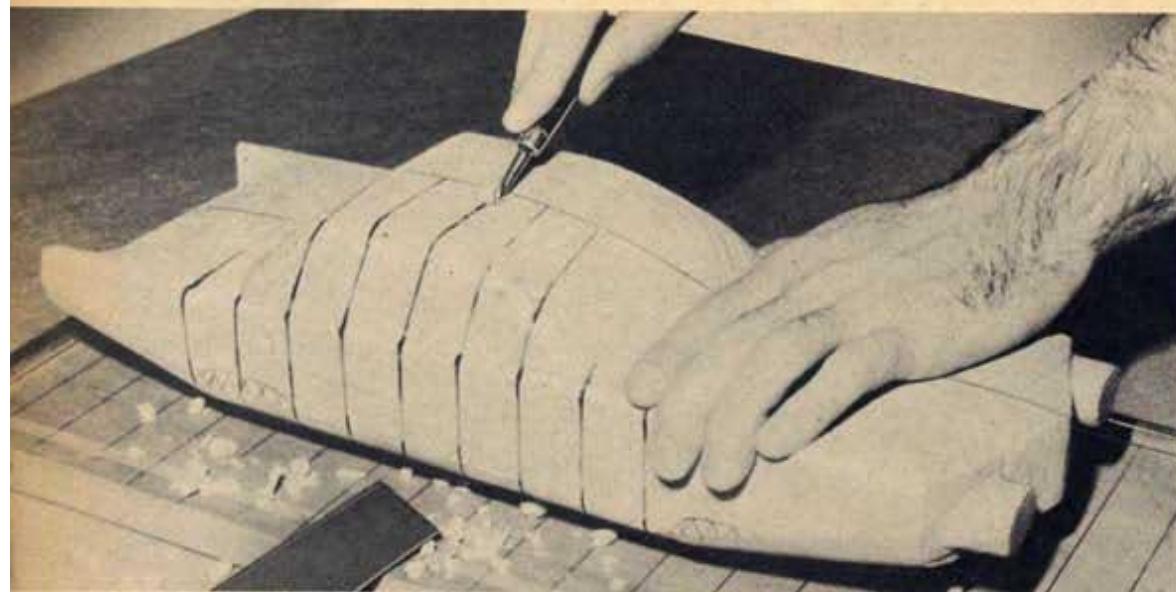


If you made a clay model, it is here that you use the templates to carve an exact replica of your original idea. (Full details on working with clay were printed in the May '64 Model Car Science, a few copies are still available and can be obtained by sending .50¢ to Delta Publishing Co., 171 Barrington Pl., Los Angeles, Calif., 90049). Place the wood model on the baseboard in the exact location on which the clay model was built.

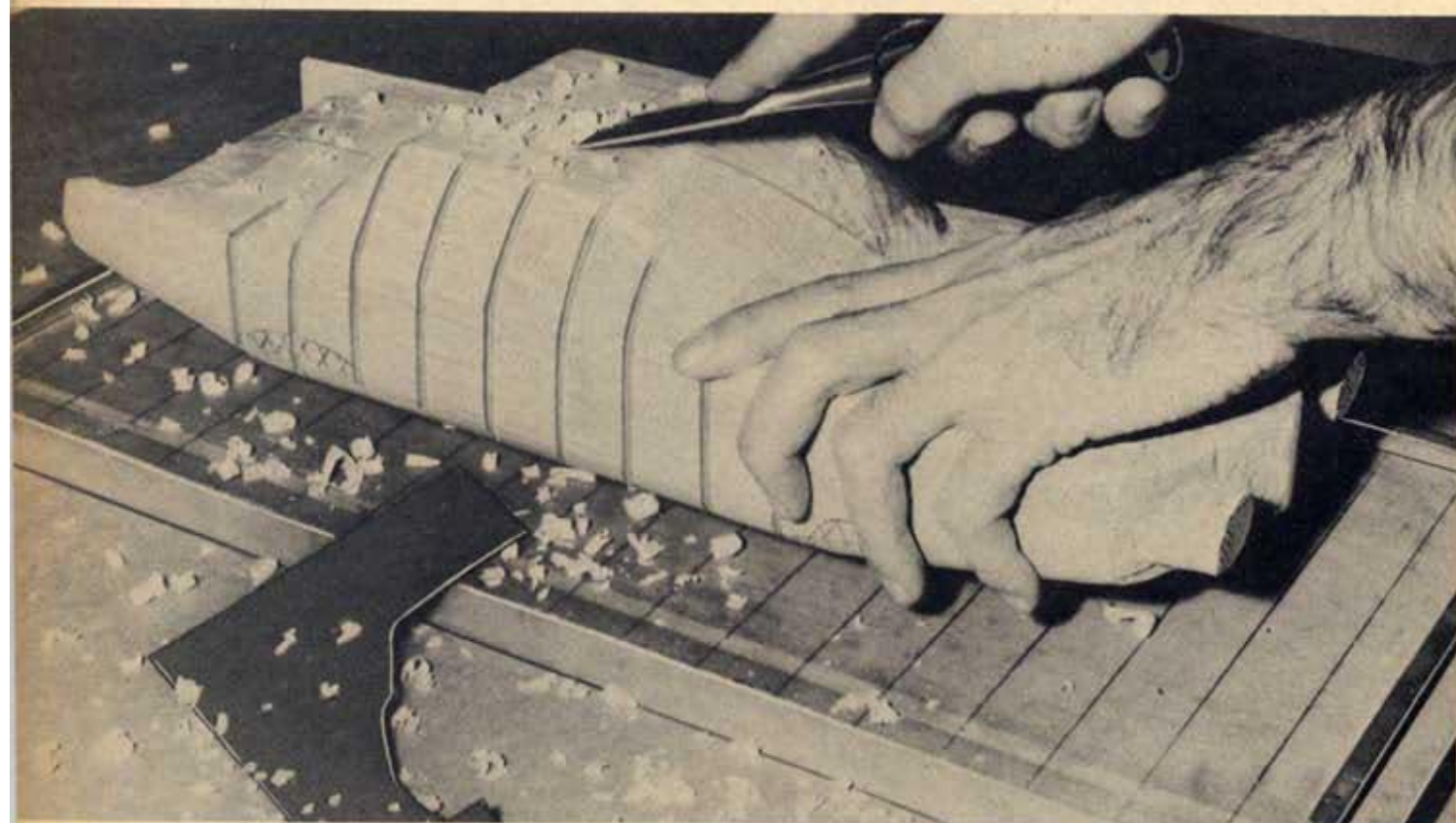
Use the baseboard as a guide to restore the station lines and lengthwise centerline. Rub a black crayon or colored chalk along the edge of the templates.

Place each template on the proper station marker along the baseboard and rub it firmly against the model to make a crayon mark at high spots.





Use a small gouge or a round file to level high spots. Repeat the process until template fits perfectly; top at the centerline and bottom tight against the surface board.



Use a flat chisel to remove the surplus wood from between gouge lines. Work carefully to prevent the tool from slipping and causing damage.

A wood chisel and gouge are the most suitable tools for completing wheel cutouts in the solid block.

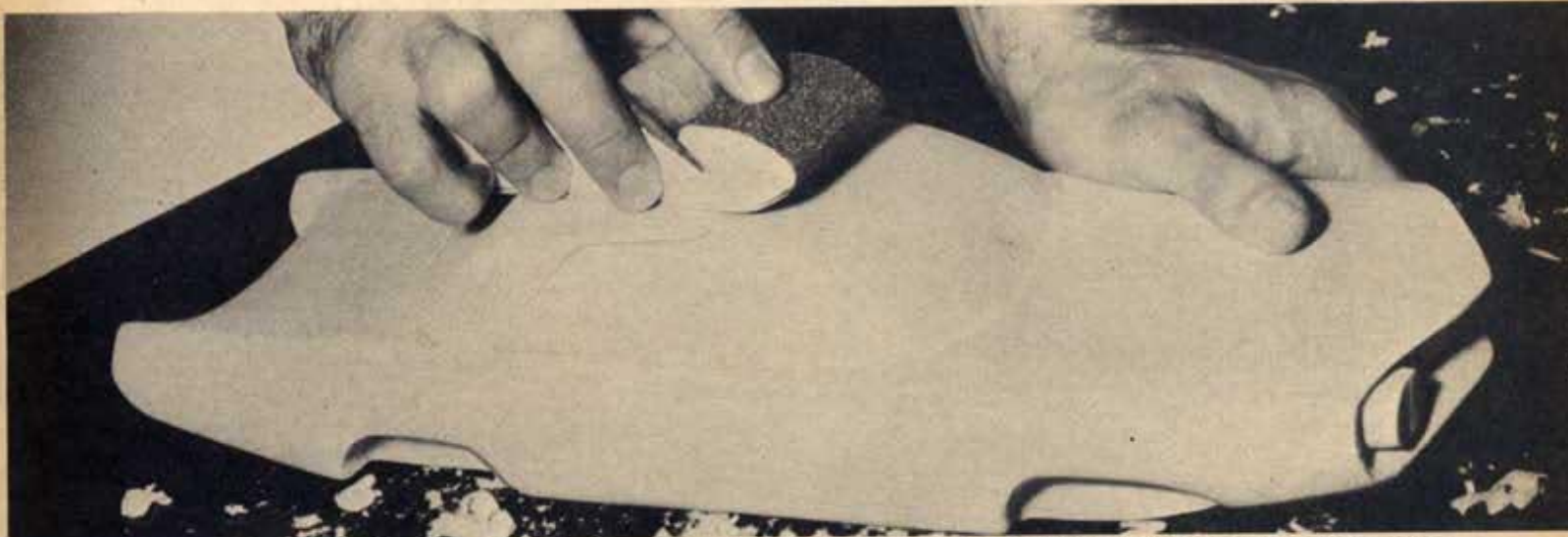




After the model has taken final shape, roof and window areas should be defined with a small knife.



Carefully following the outline, remove the excess wood from the marked areas with a small knife, wood gouge and sandpaper.



Finally, a sanding block with rough and then fine sandpaper is used to produce perfectly smooth and even areas.

After you are satisfied with the sanding process, you will be ready to scribe in the doors, deck lids, etc. These lines should be $1/32$ " in depth and width to conform to Guild specifications.

Once the wood work is completed, as many as 5 to 10 coats of sealer, primer-surfacer and lacquer, with careful sanding and rubbing between applications, will produce the veneer-like, metal smoothness so noticeable to judges.

Moldings, grilles and bumpers, which glisten like chrome, are usually fashioned out of soft aluminum bar stock that has been heavily buffed and polished. Sometimes copper is used and chrome-plated. Some youths even improvise their own buffing tools by removing the blades from a fan and using it as a chuck to hold a rod of polishing material.

One of the most impressive features of the competition is the ingenuity displayed in trimming the cars for the Guild competition. Wheel spokes are made of pins. Ma's coat buttons and rhinestones become hub caps. Fork tines are fashioned into grilles. Red caps from toothpaste tubes, bits of plastics toothbrush handles, red fingernail polish — all serve as taillights. Even the tops of thimbles are cut off for headlight rings. Metal handles have been taken off kitchen drawers to make bumpers. Sev-

eral boys have used railroad track for chrome strips and accessories, and others have formed wire mesh into egg-crate grilles.

The most elaborate interiors blossom forth with beautiful leather seat covers, handsome floor carpeting, safety belts and a variety of tiny gadgets and accessories. Simulated rows of push buttons have been used for opening doors and lowering and raising windows. Seats have been constructed so they could be moved backward and forward. One youth even built a small wrist watch into the dashboard.

If you haven't entered the contest as yet, it is not too late to do so. Merely fill out the coupon below and mail it to the Guild. When you receive your material, read the manual *Designing and Building a Model Car*. Keep in mind all the specifications and dimensions listed on the sketch sheet. Remember, your entry will not be judged by the number of hours you spend, but by what you put into each of those hours.

Don't forget that the deadline for the 1963-64 competition is midnight Friday, June 5, 1964. Your shipping box must be postmarked before this date.

THIS COUPON MAY BE WORTH A COLLEGE EDUCATION—SEND IT TODAY!

Fisher Body Craftsman's Guild, Dept. MCS Warren, Michigan

Please enroll me in your 1964 Model Car Competition. Send me the free instruction booklet, "Designing and Building a Model Car."

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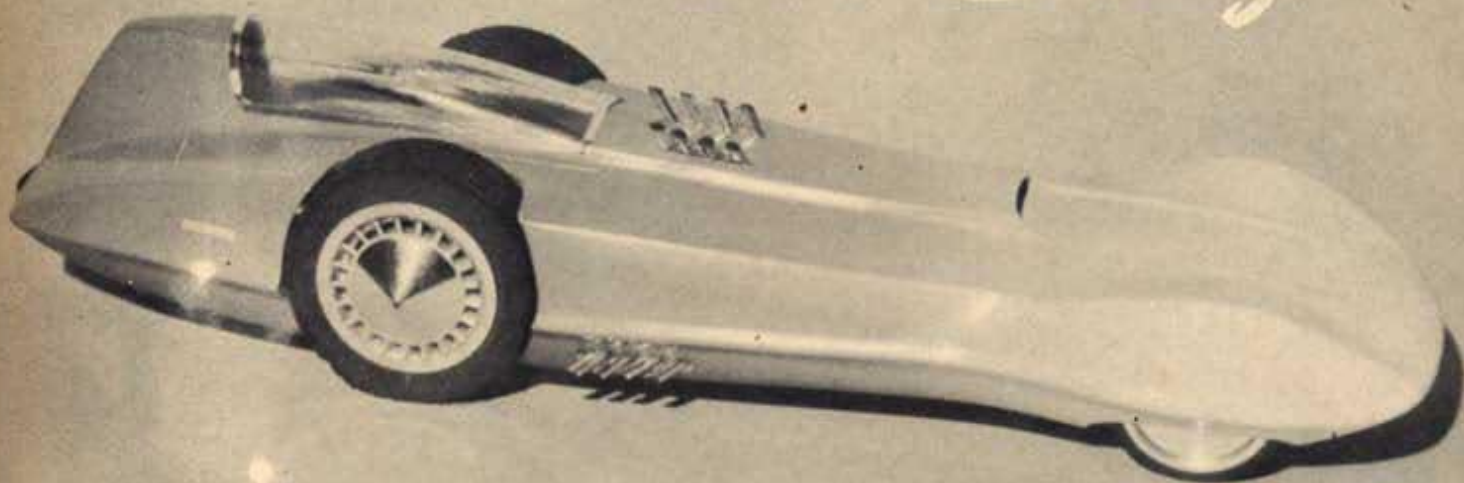
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1947 <input type="checkbox"/>	1952 <input type="checkbox"/>

TRY THE TWISTER

...it Swings



By Bob Hoepfner



THE EASY flowing lines of this 1/25 scale version of the Twister present little difficulty to its reproduction in a model. Any soft wood may be used in making the body master. The big majority of model builders seem to prefer balsa, perhaps due to an earlier association with model airplanes. There are many draw backs to the use of balsa for model cars, its open grain and inherent softness are a delight for hacking away on, but is also the main reason it is undesirable for tight contours or any kind of detail carving. Soft woods are available that will work almost as easy and, due to a much closer grain, will allow incorporating much finer detail and little effort is required in finishing to a satisfactory surface. Poplar, Bass or Sugar Pine are all superior to balsa for this phase of model building. (For additional information on this subject, see the article on working with wood on page 14).

Using the plans shown below, make the initial block no larger than necessary, 2 3/4" x 9" x 1 3/4" is adequate. Square up and transfer profile and plan views to side and top of block. The two views

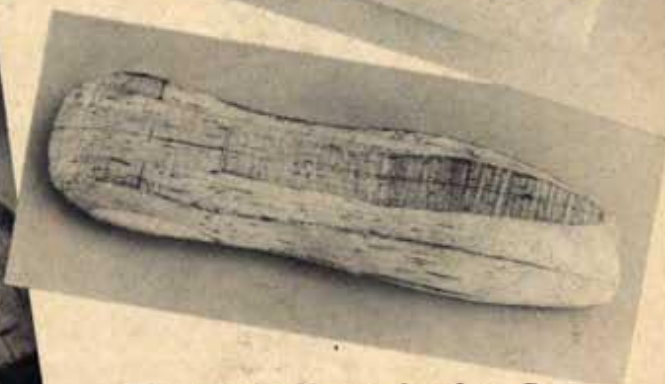
The basic wood block should be no larger than required. Use wheel center lines to register both profile and plan view outlines. Trim excess material with a band saw or coping saw.

Waste material is removed by sawing in two directions. Trim to side outline first, then using small nails hold part removed in place as top outline is cut.



The blank roughly carved to shape. By studying cross sections, an idea of the major amount of material that can be quickly removed is indicated.

Templates are used to check cross sections as contours take shape, and to hold symmetry from side to side. When close to final shape is achieved, blend all contours.



must register and the wheel center lines are used for this purpose. Carry them completely around the block using a small tri-square or triangle. If the outlines are indicated on all four sides of the block they will help in making proper saw cuts. Saw the side view profile first, just outside of the line. When completed, the stock removed should be temporarily nailed to the body blank to form support for the vertical saw cut. Be sure your coordination lines match before nailing. Make the vertical cut and discard the excess material. You are now ready to start shaping the blank, which is roughly to dimension and shape in two views.

Using the templates and photos as a guide, remove unwanted material. The formed bead running horizontally from front to rear on each side must be maintained and its peak should remain a straight line to aid in developing the parting line for the plaster casts. The natural lines of this car present no problems in making a two part cast in which the exterior contours may be reproduced in various mediums. After roughing to shape using the cross-section templates as guides, blend in all contours and sand

to a nice smooth surface. Wheel centers and enclosure opening should be indicated at this time by small scratch lines that will be witnesses as to location or cut lines when the shell is completed. Finish with sanding sealer, sanding between coats until all small imperfections in the surface have disappeared. Wax and rub down with at least two coats of a hard paste wax and the body shape is complete.

To be able to cast over the shape we have just produced: a line around the maximum width must be established. This will fall on the center of the bead projecting on each side of the body following around the center of the radius of the front and rear. The easy way of establishing a plane at this level to cast to, is to cut a plan view template slightly larger than the body. Using oil base modeling clay: support the body in the space provided and fill in any voids between the body and edges of the wood. To prevent the plaster running under the edge, a fence is erected around the base board. It can be of any convenient height but do not cast more than approximately 1/2 inch above model.

A parting agent of some kind must

next be applied to all surfaces that will be in contact with the plaster to prevent sticking and easy removal of the cast. Many commercial ones are available or use a good coat of wax. One of the harder pattern plasters should be used such as Hydracal or Ultracal as the surface hardness will be greater than the common casting plasters such as plaster of paris. This will help in retaining edges and prevent surface scratches in handling.

There is a right and wrong method in mixing plaster. Do it the correct way and avoid trouble. Estimate the amount of volume required to fill the area involved. Use almost this amount of water in a pan, now sift the plaster into the water and keep adding until small islands appear above the surface of the water, keep adding plaster until there is little water above the surface of the plaster. Let this sit for about a minute and then stir gently to avoid entrapping excess air; do not beat as you would in preparing some mixes for cooking. This just adds excessive air to the mixture and should be avoided as it will result in small bubbles appearing on the surface of your cast mold. Do not stir for more

All cross sections should now be blended and faired ready to sand smooth and finish. Surface must be well sealed, smooth and free of imperfections before casting.



Use care in establishing correct parting line to avoid trouble in casting. Clay must be built up to exact center of head running around body.



A parting agent is applied to all exposed surfaces and a box is erected around base to contain plaster. Sides should be a minimum of 1/2 inch above top of pattern.

than a minute. When all the plaster is blended into a smooth creamy mix, pour gently over the pattern until it is completely covered to a depth of about 1/2 inch. If you have any excess, throw it away immediately and wash out your pan with lots of water to prevent its setting up and making its removal much harder.

After the top cast has set up hard (usually about one hour) remove the fence and base board, then clean off all the clay that may remain on the surface. Apply another coat of wax or parting agent to the exposed surfaces and reassemble the fence around the first cast. Since the bottom is much flatter than the top, this pour will require less plaster than the original one. After the second cast has set, remove the boards

and gently tap a knife blade on the line dividing the two cast surfaces. Work around from end to end tapping gently. If you have done everything correctly the block will open and the body master can then be removed.

Before any further operations can be performed the cast blocks must be allowed to air dry thoroughly. This will take approximately three days or over night in the oven at not over 100°, then turn off, but do not remove until the cast blocks temperature has dropped to normal.

For the home constructor, a fiberglass layup is undoubtedly the most satisfactory method of obtaining a body shell from the cavities produced. No special equipment or hard-to-learn methods are needed. From previously published in-



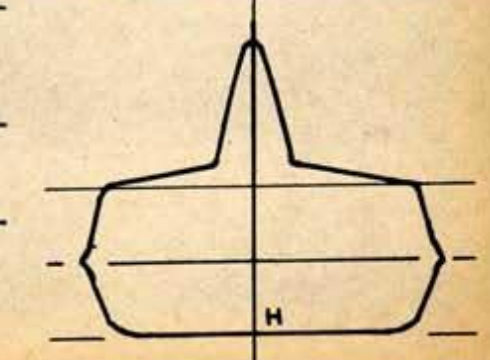
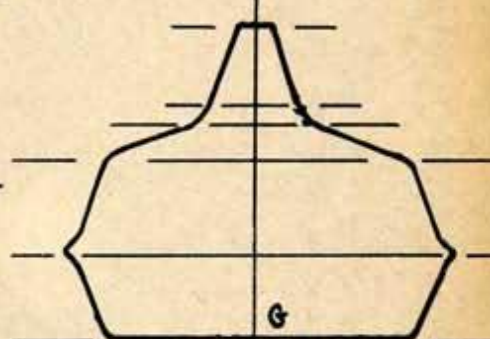
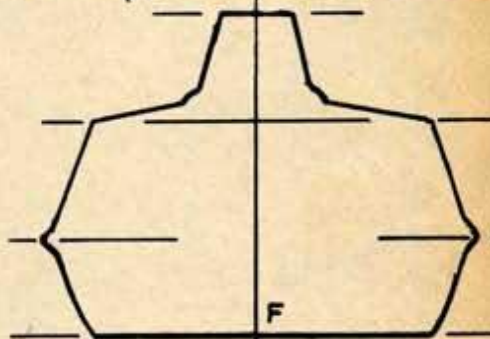
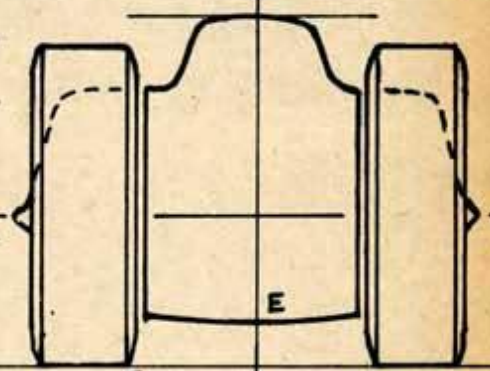
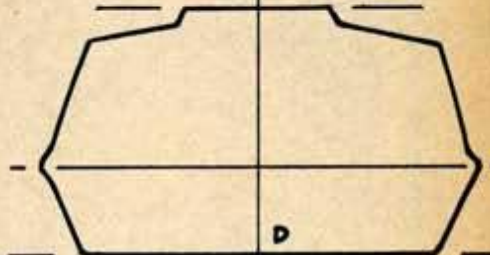
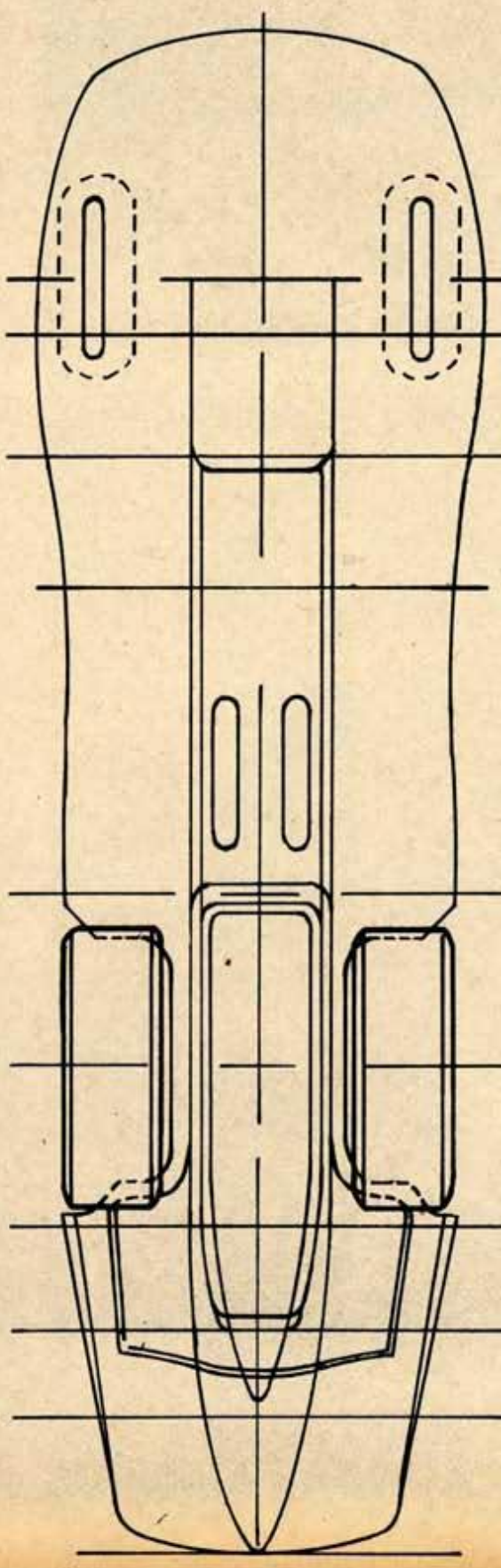
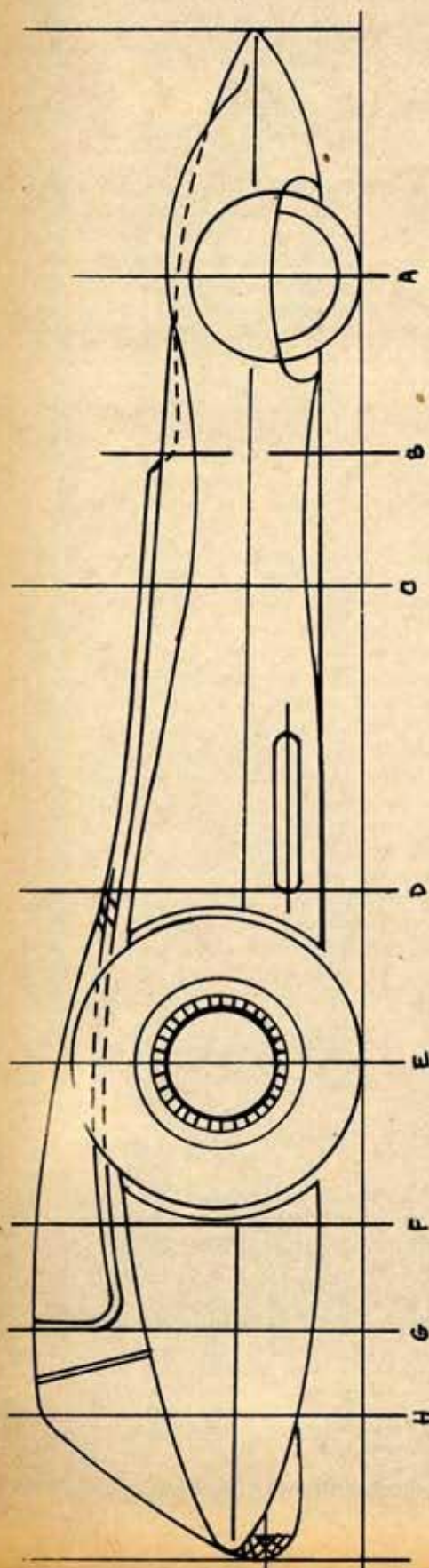
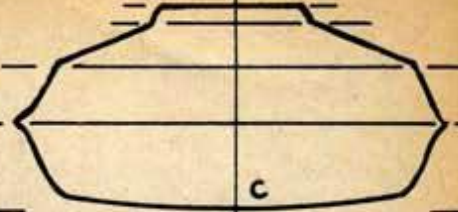
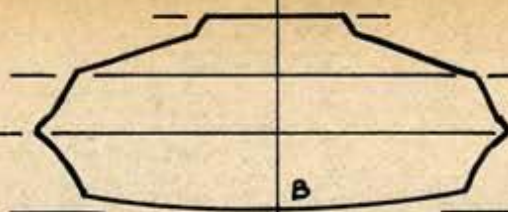
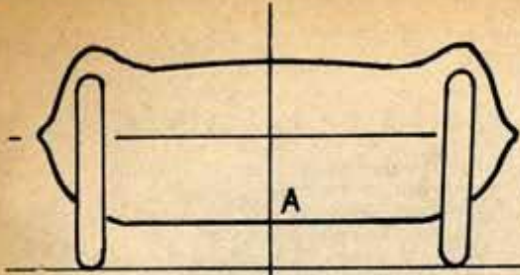
formation many of you should be somewhat familiar with the basic operation. The methods remain essentially the same regardless of type of resin or epoxy used in construction. As in most model construction, effort expended in doing the job properly the first time will prevent an undue amount of repair and clean up in the finishing operation.

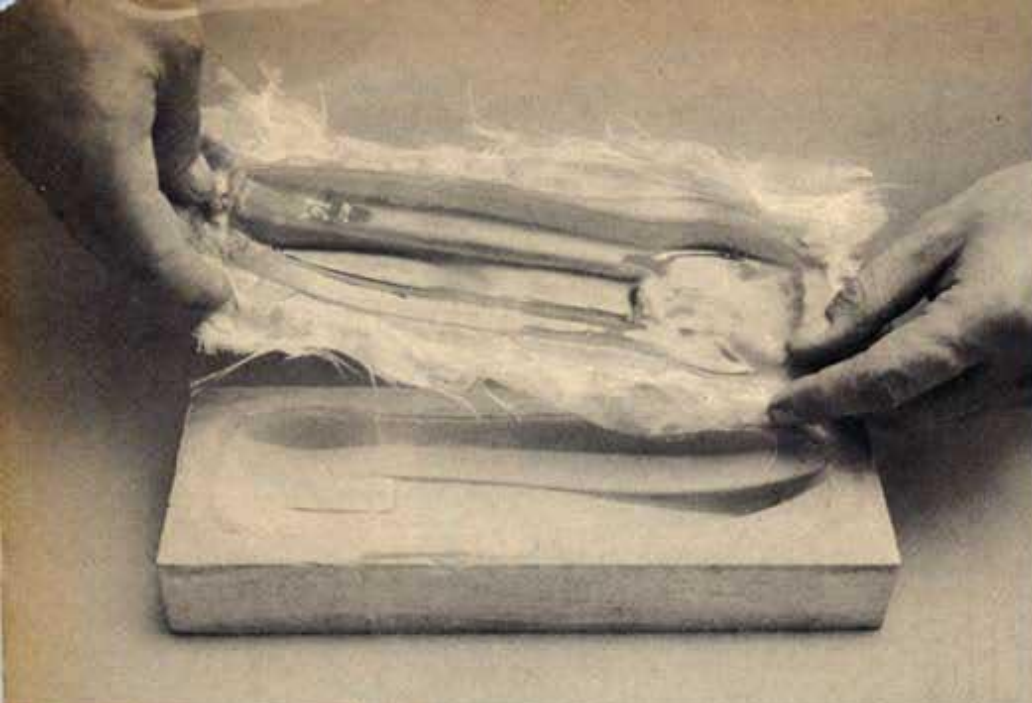
Light-weight fiber glass cloth as well as the Polyester resins or Epoxys used in laminating are usually available at any well stocked shop carrying a complete line of craft and hobby supplies, so obtaining materials should not be a problem. To avoid sticking or lock up in the mold: by all means spend some time in preparing it. Fill any small imperfections. Seal the surface with a sanding sealer and apply two or three coats of a hard paste wax, rubbing out well between each application or until a smooth glossy surface has been obtained.

In using any Polyester resins or Epoxys: be sure to follow the directions to the letter. Measure the proper amount of catalyst as accurately as possible, mix well before using and have an adequate supply of Acetone to clean up brushes and your hands, during the layup procedure.

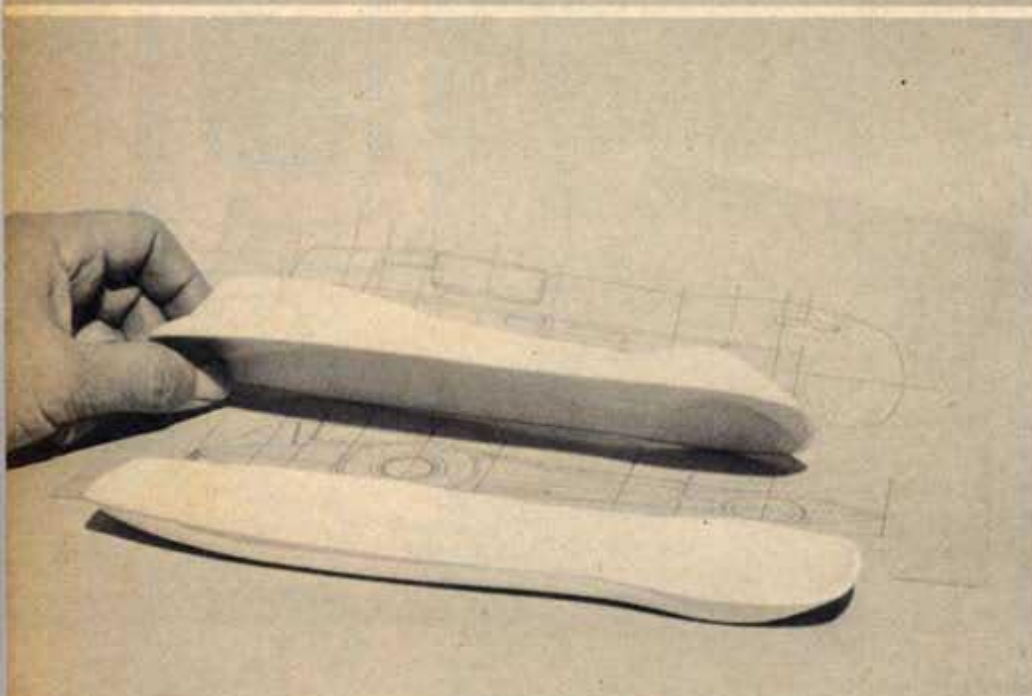
Allow the first or surface coat of resin to become tacky or almost set before cloth layup is started. The number of

The two plaster casts are now ready for the fibre glass layup. Working surface must be well sealed and waxed before starting.





Pre-trim glass cloth to approximate size and shape before starting laminating operation. Work out all entrapped air to eliminate voids between layers of glass cloth. Care at this point will pay off in the improved quality of the completed shell.



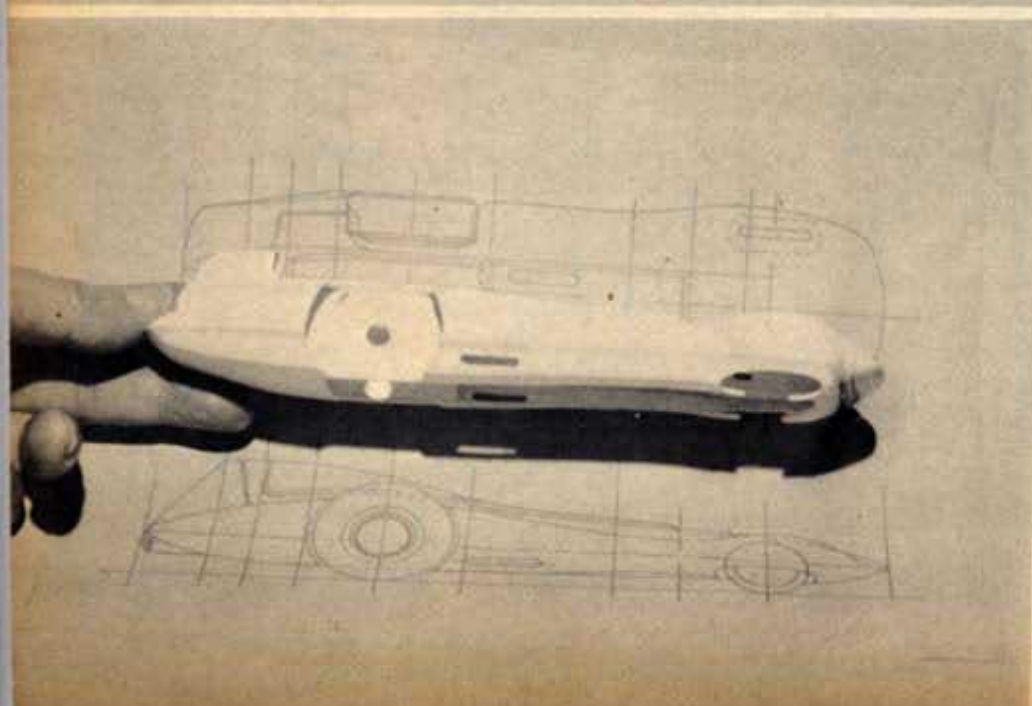
layers required for an adequate wall thickness will depend upon many variables: weight of cloth, resin and skill in layup. You will have to judge for yourself. Don't go too thick as a thin wall will have more than enough strength in normal handling.

After both sections have been completed they may be trimmed of the excess overhanging material and openings can now be cut in the shell for wheels, stacks and cockpit enclosure. A fine tooth jewelers saw blade in a coping saw frame is the best tool for this purpose.

A vacuum formed shell can be made in the same molds as the fibre glass layup and is much faster, being fortunate enough to have a friend that has a vacuum former, we took the short way out and used a styrene shell in building our model. It has no real advantage over the glass laminate in any way other than the ease in which the initial shape is obtained, in fact the glass cloth shell will be much stronger.

If care is used, little clean up will be required. The two sections can now be cemented together using the resin for joining.

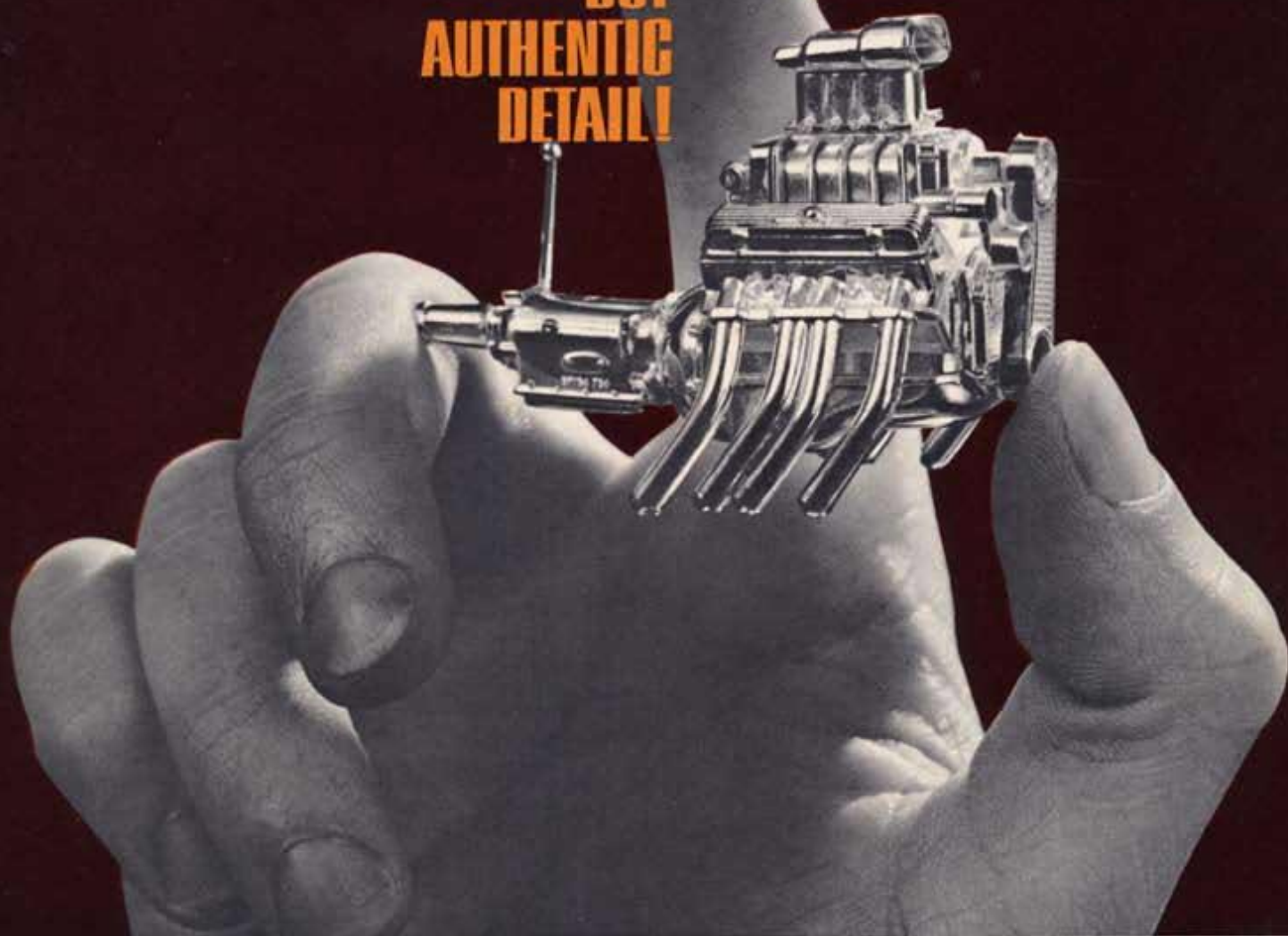
Your direction from now on will depend upon your own desire as to what type of completed model you wish. It can be motorized for operation on tracks or drag strips, or following the description of the car in P.H.R. Dec., '63 and M.C.S., March, '64, a full detailed interior can be installed. With either approach, it will add a distinctive and original car to your collection.



The vacuum formed shells trimmed of excess material are ready for cutting wheel openings and cockpit enclosure hatch.

The Twister body shell in near completed form. Wheel centers established and axle supports are installed. Detailing can now start if a display model is desired, or your thinking may run to methods of motorizing.

NOT
JUST
SCALE...
BUT
AUTHENTIC
DETAIL!



421 Pontiac Engine, Accessory Pack 3002

Our scale model must be authentic in every detail or we will not build it! At AMT, authenticity is a word we live by . . . for authenticity to us means extremely detailed precision in cars you can build for slot racing or for show—as stock, custom or racing models.



- **Stock models**, authentically detailed down to the very numerals on the speedometer by the official model maker to the industry.
 - **Custom models**, each one authentically styled by one of the nation's top customizers on the exclusive AMT team:
- | | |
|---------------------|-----------------|
| The Alexander Bros. | Bill Cushenbery |
| Budd Anderson | Dean Jeffries |
| George Barris | Gene Winfield |

- **Racing models**, loaded with competition parts authentically reproducing the products of these leading speed equipment manufacturers:

Airheart Products
B & M Automotive
Bell Auto Parts
California Custom Accessories
Clay Smith Cams
Eelco Manufacturing Company
Grant & Grant Industries
Hands Wheels

Hedman Hedders
Honest Charlie Speed Shop
Hurst-Campbell
Offenhauser Equipment Co.
Rayson-Craft
Schiefer Manufacturing
Spalding Products
American Racing Equipment





AMT THREE-IN-ONE SERIES

All AMT 1964 models are loaded with detail, chrome accessories, decals, extra parts . . . more than everything you need to make an authentic 1/25th scale version of the manufacturer's stock, your own or a top pro's custom, or a competition racer. Identical to the big ones in every detail! Suggested retail price, \$1.50.



No. 5014
1964 Olds Cutlass
Convertible



No. 5114
1964 Falcon Sprint
Convertible



No. 5614
1964 Tempest Le Mans
Convertible



No. 6314
1964 Mercury Parklane
Convertible



No. 6414
1964 Lincoln Continental
Convertible



No. 6514
1964 Buick Wildcat
Convertible



No. 6614
1964 Pontiac Bonneville
Convertible



No. 6814
1964 Chrysler Imperial
Convertible



No. 5024
1964 Olds Cutlass
Hardtop

No. 5124
1964 Falcon Sprint
Hardtop



No. 5164
1964 Fairlane 500
Hardtop



No. 5624
1964 Tempest GT0
Hardtop



No. 6324
1964 Mercury Marauder
Hardtop



No. 6424
1964 Lincoln Continental
Hardtop



No. 6524
1964 Buick Wildcat
Hardtop



No. 6554
1964 Buick Riviera
Hardtop



No. 6624
1964 Pontiac Bonneville
Hardtop



No. 6824
1964 Chrysler Imperial
Hardtop

No. 6114
1964 Ford Galaxie 500XL
Convertible



No. 6214
1964 Thunderbird
Convertible



No. 6714
1964 Chev. Impala S/S
Convertible



No. 6914
1964 Corvette Stingray
Convertible

No. 8744
1964 Chevrolet
Station Wagon



No. 8734
1964 Chev. Chevelle
El Camino Truck



No. 8133
1964 Ford F-100 Truck



No. 6124
1964 Ford Galaxie 500XL
Hardtop



No. 6724
1964 Thunderbird
Hardtop



No. 6654
1964 Pontiac Grand Prix
Hardtop



No. 6724
1964 Chev. Impala S/S
Hardtop



No. 6924
1964 Corvette Stingray
Hardtop



AMT ADVANCED 3-IN-1 SERIES

Deluxe 1964's with all the goodies of the regular 3-in-1 models . . . and plenty more! A modeler's tool, like blade holder or putty rake, plus special AMT features—real working lights, steerable wheels, major restyling components, racing trailer or some such. No question about it. They're the latest and greatest! Suggested retail price, \$2.00.





AMT TROPHY SERIES

Through the years, certain cars catch the particular fancy of restorers, customizers and racers. And AMT brings them to you in all their authentic detail, along with a big selection of customizing parts and genuine scale model speed equipment. Here they are—all great trophies! Suggested retail prices, \$1.50 and \$2.00 (asterisks).

No. 2225*
1925 Ford Model T
Roadster or Pickup



No. 2129*
1929 Ford and Ala Kart
(Double Kit)



No. 2134
1934 Ford Pickup



No. 2136
1936 Ford



No. 2140
1940 Ford Coupe



No. 2232
1932 Ford V-8 Coupe



No. 2240
1940 Ford Sedan



No. 2257*
1957 T-Bird
(loaded with customizing extras)



No. 2632
1932 Ford Model B Roadster



No. 2161*
Dragster and Fiat Coupe
(Double Kit)



No. 2149
1949 Ford



No. 2150*
1950 Ford Convertible
(loaded with customizing extras)



No. 2157*
1957 Ford Hardtop
(doors open, wheels steer)



No. 2757*
1957 Chevrolet Hardtop
(loaded with customizing extras)



No. 2349
1949 Mercury Hardtop



No. 2127*
1927 Ford and XR-6
(Double Kit)



No. 2153
1953 Ford Truck



No. 2163
Dragboat



No. 2758*
1958 Chevrolet Impala
(doors open, wheels steer)



No. 2532*
1940 Willis and '32 Ford
(Double Kit)



No. 2432
1932 Ford V-8 Victoria



No. 2162*
Silhouette
(with custom trailer)



No. 2128
1928 Model A Ford
Tudor Sedan



No. 2190
Watson



No. 2164*
Dream Rod
(with operating turntable)



AUTHENTIC CUSTOMIZING LACQUERS

The real pros choose lacquer every time —so naturally, that's what AMT gives you. In 30 wild new colors! Four custom finishes! And a fantastic new one-step Metal Flake! So easy to work with because they dry in minutes instead of hours . . . with deep-down lustres that are possible only with lacquer.



Amazing breakthrough! Exciting Metal Flake finish with one-step spray application.

Devil's Red
Royal Blue
Emerald Green
Aztec Gold
Fire Orange

Frost Grape
Root Beer
Ultra Violet
Peacock
Lemon Lime



New way-out Metallic Lustre colors are sure-fire stoppers for any model, show or shelf.

Red Velvet
Blue Fog
Green Mist

Orchid Silk
Burnt Charcoal
Sterling Silver



New translucent Kandy Kolors for adding the glow of extra depth to gold or any metallic base finish.

Ruby Red
Oriental Blue
Mint Green

Wild Cherry
Tangerine
Base Gold



Solid Gloss Lacquers will always be popular—and now, authentic competition colors, too!

Red
Blue
Black Gloss
White

Racing Orange
Competition Yellow
Clear
Flat Black Primer

AUTHENTIC CUSTOM & COMPETITION ACCESSORIES

Be your own customizer! Wherever you buy your kits, look for the AMT display of 1/25th scale model accessories. AMT's super-detailed authentic components let you restyle any model or build in plenty of extra kick-power with souped-up mills and extra-soft racing tires. Don't overlook the always handy AMT body putty—and note the newest: working head- and tail-lights for any model!



AMT CORPORATION • DEPT. MS, BOX 400 • TROY, MICHIGAN



Styling Tips

APPLYING PUTTY FOR A FLAWLESS APPEARANCE



Putty is applied to areas needing filling, molding, or contouring.



Putty can be worked into area by means of spatula top, artists spatula, or with the fingers.

There is no better way of filling seams or molding areas on a model than the use of putty. Many of you have had various problems with putty judging from the queries we receive each month on this subject.

AMT Body Filler Putty, Pactra Body Putty, Duratite Surfacing Putty, Rinsed-Mason's Green Stuff, and Duco Lacquer Spot In Glaze are all excellent for putty work on models. AMT Body Filler Putty and Pactra Body Putty are available from hobby shops for \$.29. Duratite Surfacing putty is available in hobby shops and hardware stores, price \$.45 per can. Green Stuff and Duco Spot In Glaze are obtainable from automotive parts houses and paint stores handling automotive paint supplies. Cost is \$1.35 for a one pound tube. This is enough putty to last a modeler a long time.

AMT and Pactra tubes have a spatula on the cap for the application of putty.

A small artist's spatula can be used for applying putty to the model. These are available from art supply stores priced from \$.35 to \$.45 depending on size. The spatula method is the best as it gives the smoothest application and reduces the chances of the formation of air bubbles.

When applying putty to model, be sure to apply an excess as it shrinks while drying. If you are using putty for contouring, spread it far enough back on the body to allow contoured area to flow smoothly.

Putty should dry for at least eight hours for best bond. After putty has thoroughly dried, work area to general contour with a file. When general shape desired is achieved, begin to sand area with #400 wet and dry sandpaper to semi-smoothness. Remember to sand carefully as putty is cut away faster than plastic by sandpaper. X-Acto's Contoured Sanding Blocks are a great aid to this problem. Cost is \$3.95 and they are available from most hobby stores. When area has been worked smooth by sanding apply a couple coats of primer to puttied area. This will bring out air bubbles, holes, pits or any other imperfections. Re-apply putty to fill imperfections, set aside to dry for eight hours. Wet sand area again, apply another couple coats of primer to check finish. You may find that still another application of putty is needed. Remember that time and patience are the most important items in the building of a professional looking model. When area is free of imperfections wet sand to final finish. Primer entire car and ready it for paint. Painting tips in the Feb. MCS article "Painting for Prizes" will prove helpful in this operation.

Remember, there is no mystery about puttying — it takes time and careful workmanship, as does everything in modeling.

Area is then primed to check for imperfections. Operations may have to be done several times to obtain flawless finish.



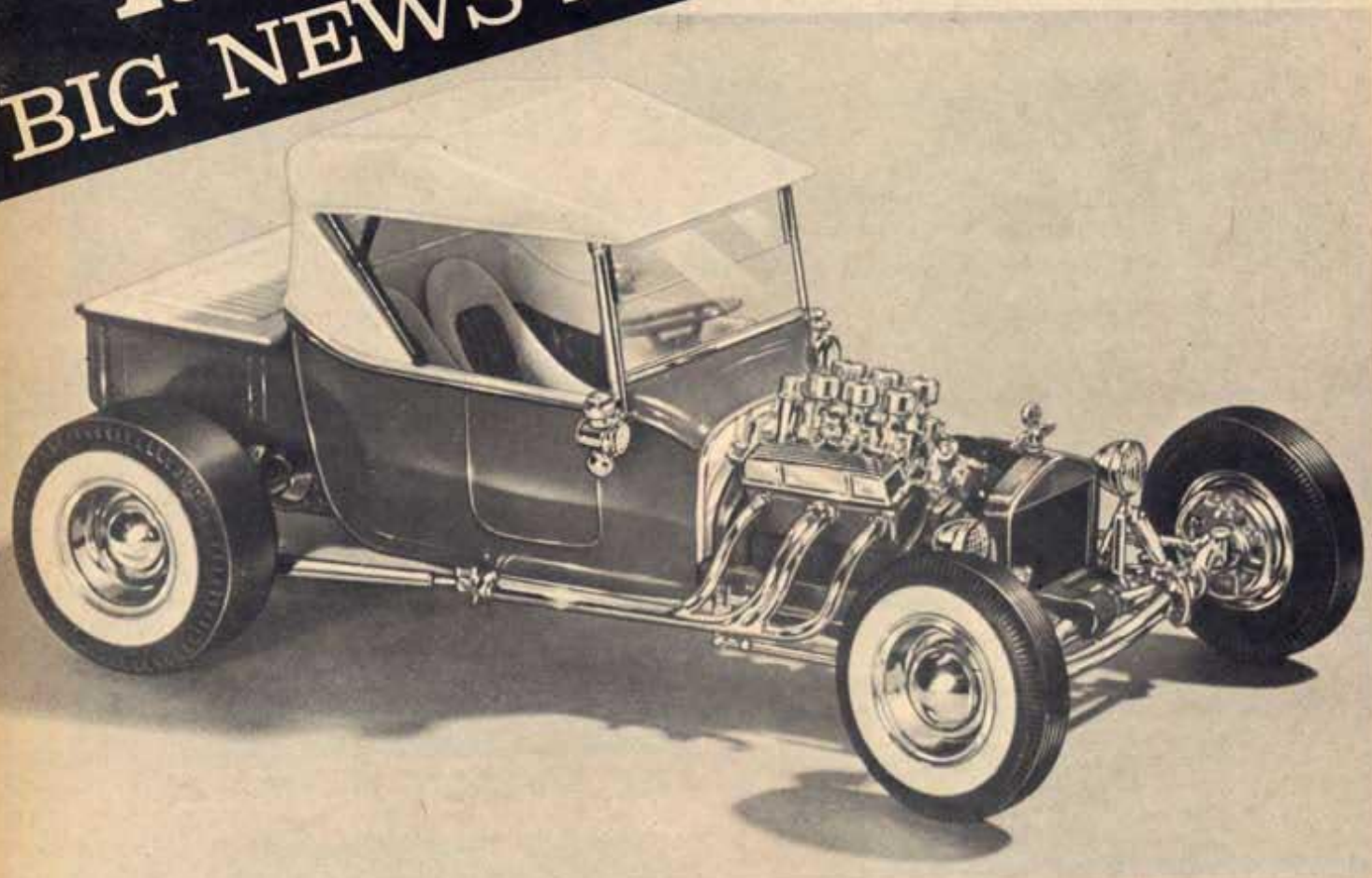
When putty has dried at least eight hours, it is worked with a file to general contour.



After general contour is achieved, model is wet sanded to semi-smoothness.



FIRST REPORTS BIG NEWS in CAR KITS



MONOGRAM

Steerable front wheels, tires and drag slicks with white wall inserts, removable top and bed cover, bucket seats, chrome fire wall and under carriage and a Chevy 283 engine with six carbs, are but a few of the bonus features of Monogram Models, Inc.'s half-inch-scale Little "T."

Featured on this month's front cover, the Little "T" kit also contains extra parts for building a roadster with turtle

deck similar to the related Big Drag and there is a chromed oval gas tank like the one used with their Big Rod.

Hobbyist who built the one-eighth-size Big "T"—and those who merely admired it — can now assemble this new version of the customized 1924 Ford.

The Little "T" kit retails for \$1.49 and includes 100 parts molded in three colors and chrome.

The 1940 Ford Pick-up, as popular among truck customizers as the 1932 "Deuce" is among car restylers, is the eighth addition to Monogram's customizing kit series in the same scale. This kit can be assembled in a choice of three versions: stock, mildly customized and "wild" custom. The 61 extra customizing parts include Kelsey-Hayes wire wheels, dual spotlights, plated generator and radiator water tank, diamond tufted upholstery and bed cover, Stewart Warner instrument panel, plated tools and fire extinguisher, '37 De Soto bumpers and '57 Chevy rear fenders.

Engine is a stock Ford V-8 with plated finned heads and three Stromberg 97 carbs.

Among the working features are opening and closing doors, operating tailgate and side windows that can be raised and lowered.

Of the 159 parts, 69 are chrome-plated. When completed, this \$1.98 model will measure 7-7/8" long.



AMT

Ford's 1928 Tudor Sedan, the original Model "A" and a perennial streaker at the drags, is AMT's newest Trophy Series kit. It comes with the wide-open Dodge Ramchargers "426" engine, complete with short ram manifold, dual

four-barrel carbs, and racing headers. In the stock version there's authenticity in every 1/25th scale detail. Doors open and close, the hood opens, front wheels steer, and the front seats fold back.

Other new kits from AMT include Bill Cushenbery's fabulous Silhouette with a booming Ford "427" engine. This is the original show version and can be built for street or strip.

The racing version of AMT's Pontiac Bonneville convertible features the 421 cu. in. engine, with dual four-barrel carbs, and chrome ram tubes and breather caps, plus a special suspension system. Chrome scavenger pipes, customized head and taillights, and chrome nerf bars are other customizing accessories available.

A competition package that includes chromed Judson Superchargers, Headman Headers, racing pipes, racing screen, special hood with buckles, Lucas Ranger Lamps and dual-throat Weber carbs, is in the new 1964 Olds F-85 Cutlass convertible 3-in-1 kit.

The Alexander Brothers, backed by George Barris, Bill Cushenbery, and Gene Winfield, made up the team of AMT Custom consultants responsible for the new '64 Mercury convertible. Custom features are: a tonneau cover, vertical and clear custom tube grilles, custom roll bar and head rests, bucket seats, front and rear roll pans, and a convertible top in the "up" position.

Stock, Custom and Parade versions of the 1964 Imperial convertible are offered in a new 3-in-1 kit, and it includes a 1/25 scale driver and spectators to complete the setting.

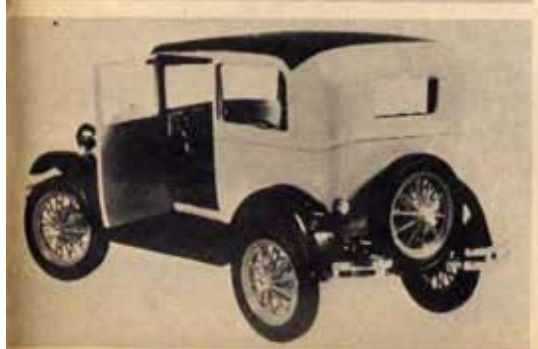
The '64 Ford Falcon Sprint in Monte Carlo Rally version has a complete Rally interior with bucket seats and a reclining navigator's seat. Engine is equipped with four, two-barrel Weber carbs, and other performance accessories.

An asymmetrically designed grille with Cibie headlights and Lumox driving lights are radical features of the '64 Tempest LeMans convertible 3-in-1 kit. Lights are offset in the custom rear bumper as well. Rear end treatment also includes a custom roll pan. Convertible boot and full tonneau, plus chrome side pipes set off the exterior styling.

In the customized version, the new Ford Fairlane 500 hardtop kit offers a clear fastback roof, custom hood with air scoop, custom grilles—front and rear, front and rear roll pans and custom bucket seats with headrests. Chrome trim package includes spotlights, mirrors, aials, fender ornaments and license plates. Complete with dual four-barrel carbs, exhaust dumps, a 427 cu. in. engine and open rim wheels, the drag strip version shows promise as a competition performer.

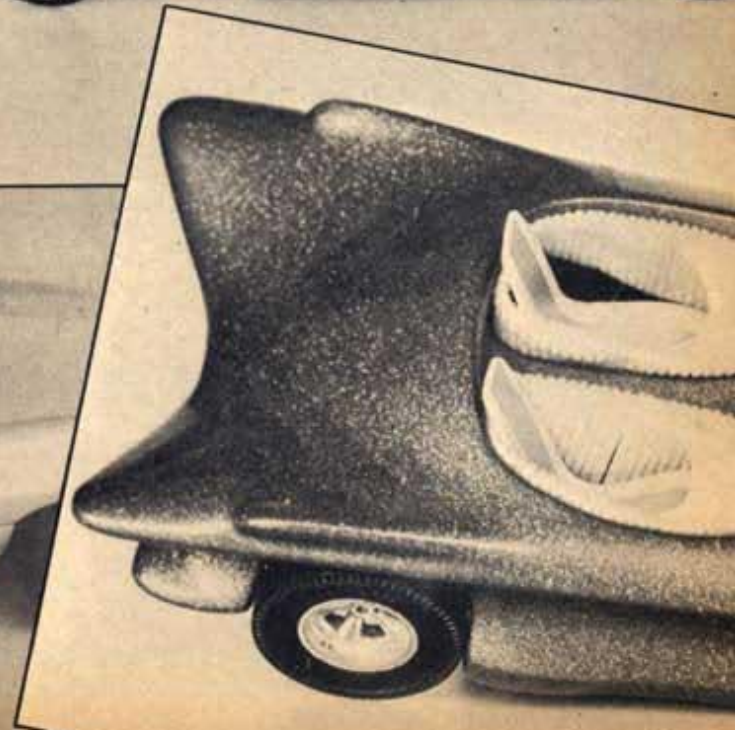
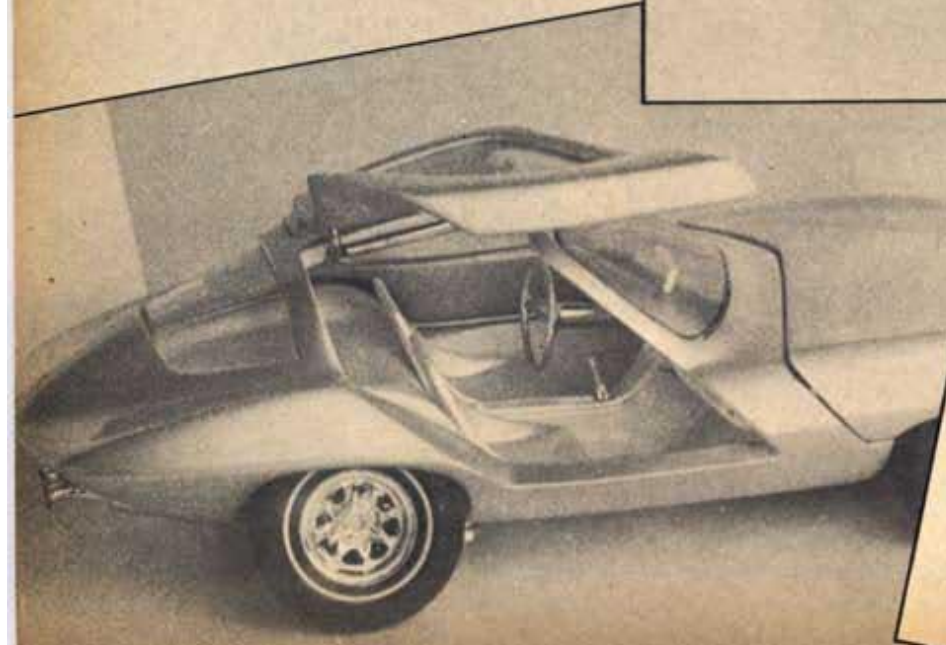
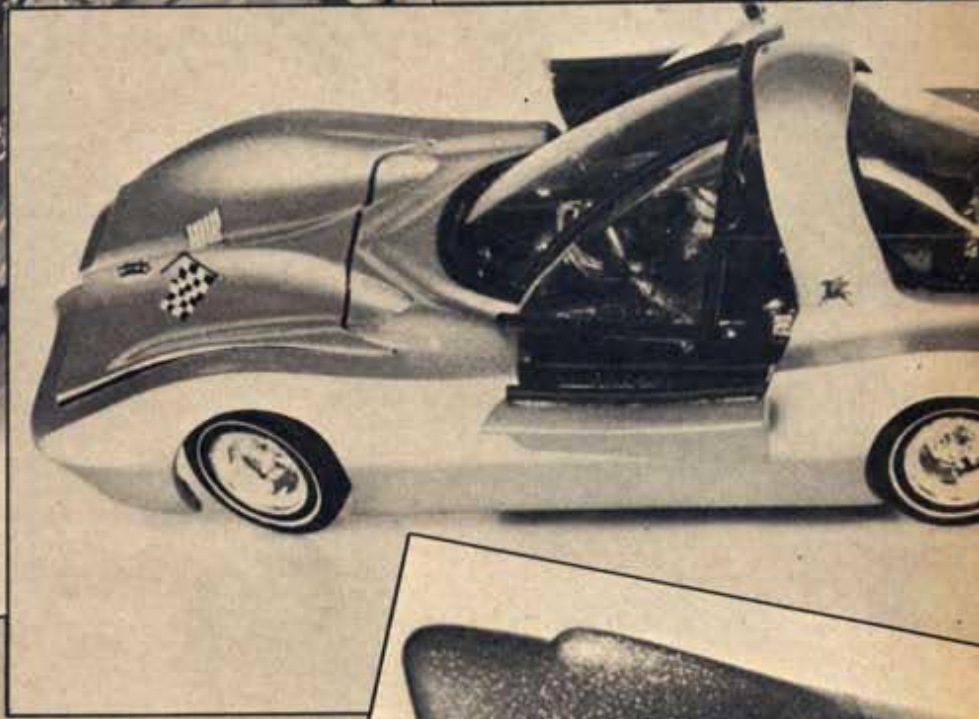
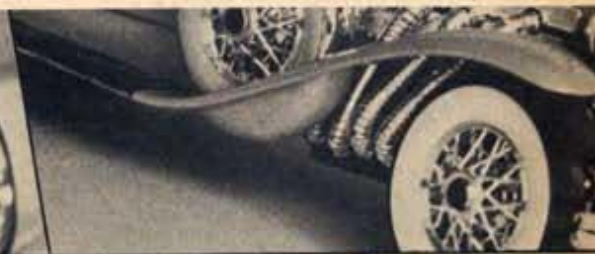
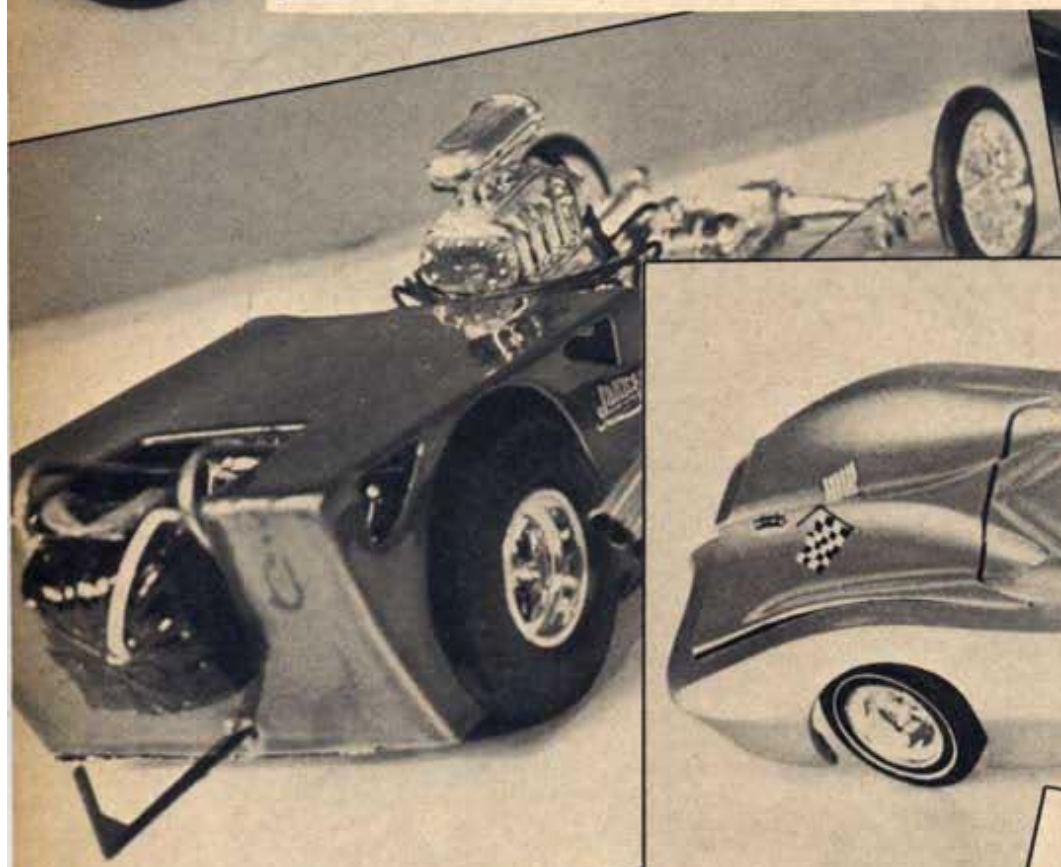
The 1964 Lincoln Continental hardtop is sure to be a hit with its custom grilles front and rear, radically different bucket seats with headrests, and sharp wheels from the Continental Mark II.

The roaring '63 Ford F-100 Pickup truck, complete with a streamlined kart, offers parts like a pleated tonneau, custom front and rear end treatments, two custom grilles, and fins.





SECOND REVELL 'OPEN'



16,000 Awards for Model Builders

IT IS CONTEST TIME AGAIN — and the folks over at Revell are busy making room for the 500,000 model cars they anticipate to be entered in the Second Revell "Open." The contest will start June 1 and run through July 31.

This year's competition has the makings of being one of the most colossal model car contests ever conducted. There will be over 16,000 awards made on the dealer level, regional level, and national level. Each hobby shop that conducts the Second Revell "Open" will award four trophies for its own particular contest. The winning entries of the hobby shop contests will be sent to Revell in Venice, California for regional and national evaluation. Competition will be in the Junior, Intermediate, and Senior divisions. The Junior division is up to age 12, the Intermediate division to age 15, and Senior division over 16.

There will also be a special paint award presented by the Pactra Chemical Company.

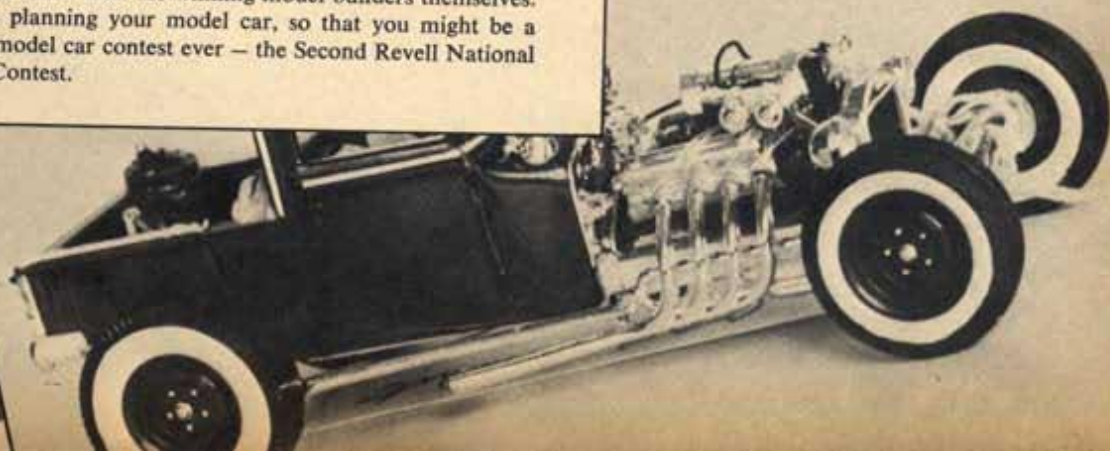
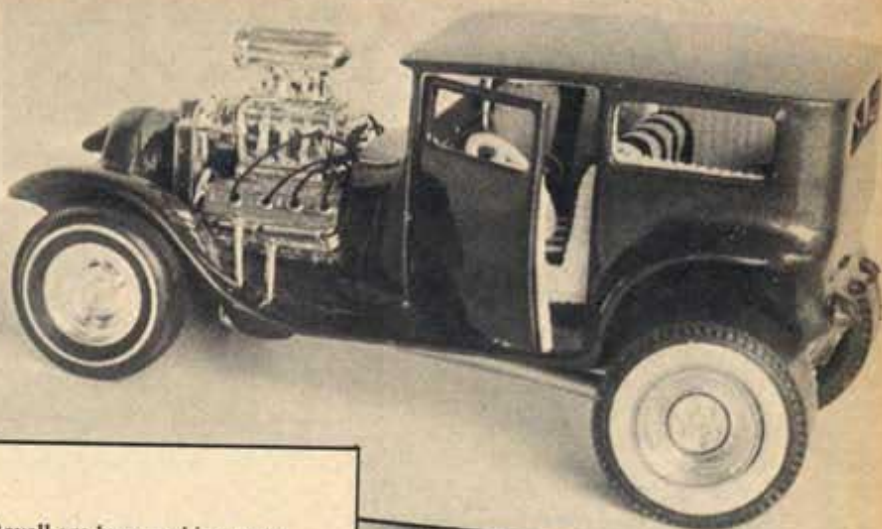
The national judges for the Second Revell "Open" are Ed "Big Daddy" Roth, world famous show car and monster designer; Dean Moon, world traveler, speed equipment manufacturer, and builder of the Mooneyes dragster; Tony Nancy, builder and driver of the '22 JR; Tommy Ivo, nationally known TV personality and dragster builder and driver; Carroll Shelby, designer and builder of the famous Ford Cobra; and Steve Urette, Editor, Model Car Science Magazine. This team of judges will gather at the Revell Contest Headquarters the second week of August and evaluate every model car entered, to select the national winners.

All types, makes and designs of model cars will be eligible in the competition. There are no brand requirements or scale specifications. Cars can be built from scratch or assembled as a stock kit. However, looking at last year's winners, it is obvious that a great deal of imagination went into the national winners.

When the national champions have been selected, they will be notified by telephone by a Revell spokesman of the honor bestowed upon them. The winners will then be flown to Southern California by American Airlines to spend a week of excitement as the guest of Revell. The winners and their guardian or traveling companion and sponsoring hobby dealer will stay at the luxurious Sheraton Marina Hotel, home of the Golden Galleon, in West Los Angeles, visit Disneyland, plus tour Hollywood and other famous Southern California attractions.

Special trophies have been designed for the Second Revell "Open." They will be in burnished silver on a walnut base designed in such a way that the winning model cars may be displayed as part of the trophy. These will be awarded at the hobby dealer level. Regional and national trophies will stand several feet high and in some instances be taller than the winning model builders themselves.

Get busy now and start planning your model car, so that you might be a winner in the most exciting model car contest ever — the Second Revell National "Open" Custom Model Car Contest.



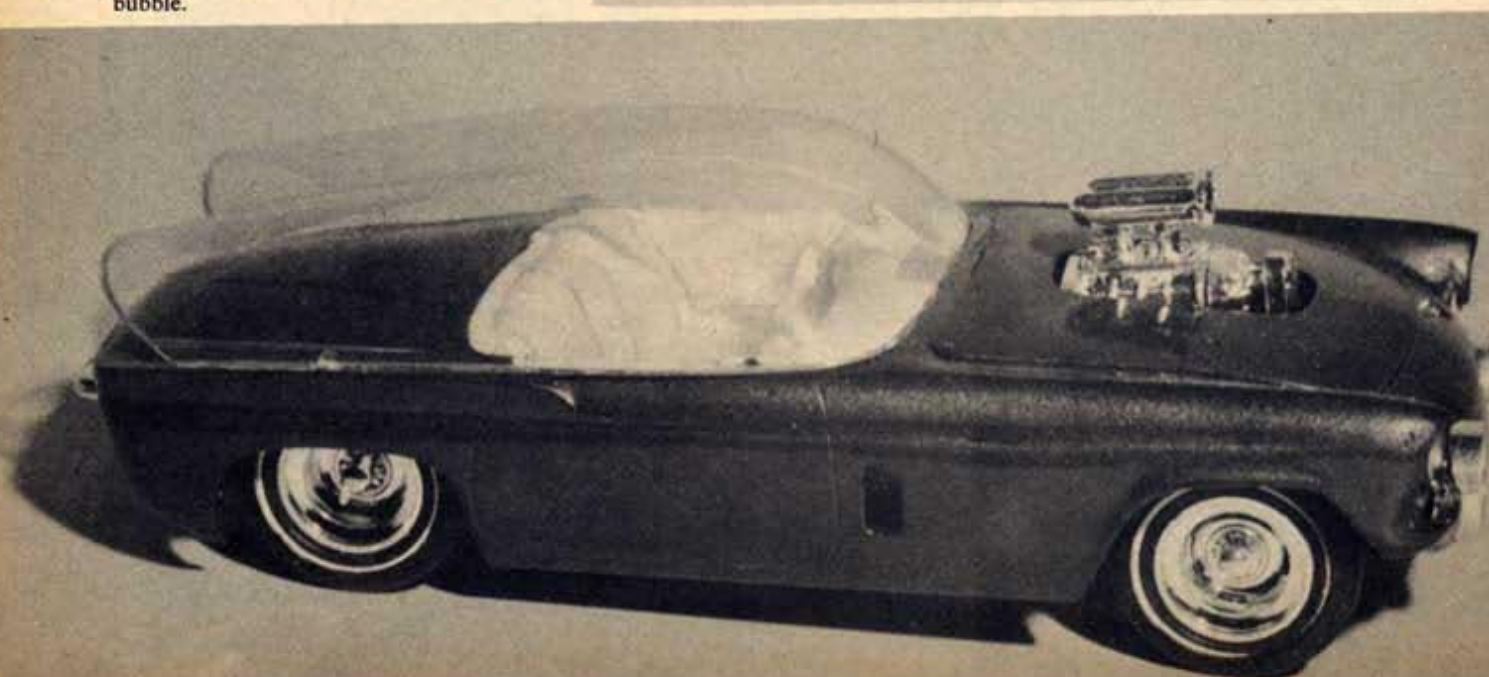
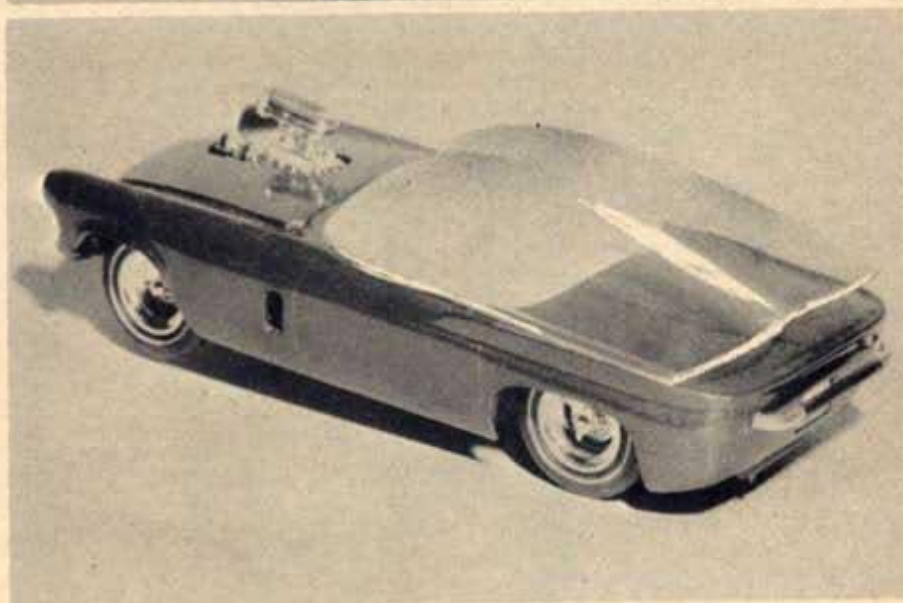
TANTALIZING T-BIRD

BY BOB PAETH

One of the greatest challenges in designing a custom model car is to combine totally different parts from different car kits. Another aspect is to change the use of certain parts, that is use them for a purpose other than originally designed for. This creation does both. The most outstanding feature of this car is its bubble top.

Taken from Monogram's '58 T-Bird in 1/24 scale, this top didn't fit our AMT '57 T-Bird in 1/25 scale. Even before the '57 was shortened the top was too long. Rather than not use the bubble, its rear portion was cut off and out came an even greater "space-age" idea.

Since the theme of the car was to be "way-out," the front and rear end had to be modified. Looking over Revell's Custom Car Parts "experimental bumpers and grilles," you'll find two round vent-type grilles. These are ideal for this project because they departed from the normal grille and again a "way-out" design. After the rear of the body is finished, a taillight must be designed. A "scratch built" taillight will be required. The two curved pieces of chrome on either end can be taken from two exhaust headers, and the red plastic lens in the center is just a piece of clear red plastic taillight sprue. The blown Chrysler engine, chrome wheels and whitewall tires came from Revell Custom Car Parts. Interior was left stock to keep it from detracting from the body features. A candy apple green from California Custom Accessories (Kandy Apple) was applied over a gold underbase. This green matched the green tint of the bubble.



After you decide on how short the trunk should be, cut off back portion of the body.



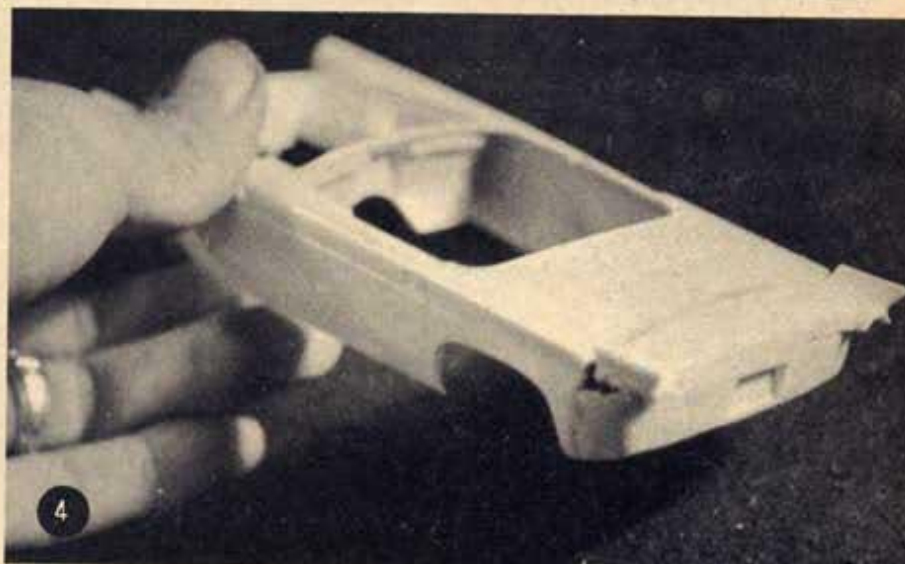
The rear portion of a '63 Sting Ray is melted into place with an electric pencil. This section will have to be widened slightly to fit.



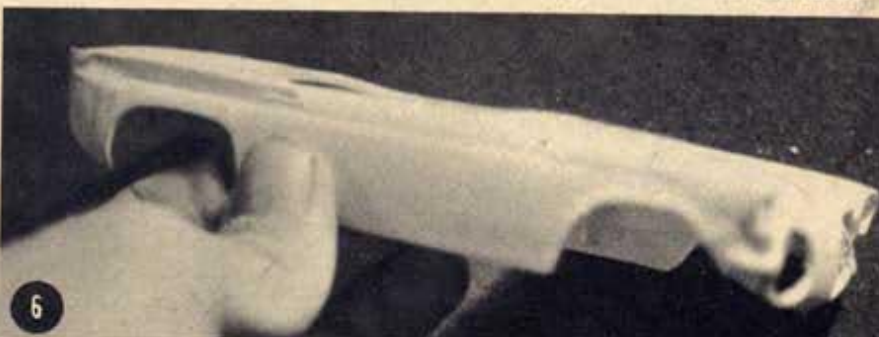
Gap at the top may be filled in with part of the trunk section that was removed. The rest of the work can be done with either melted plastic or body putty.



The custom rolled front pan from the kit is used but in a different position. Instead of laying flat, turn the pan on edge so that the two holes face forward.



In using a section of trunk, the fins must be removed. Take care when molding rear-end not to ruin the license plate cavity as this will be used later.



Stock headlight rims were used after the openings were cut to an oval shape for quads. The two small original holes were enlarged to fit the two "grilles."



After cleaning off door handles and hash marks from the front fenders, use a large file and continue the body crease into the front fenders.

An opening must be cut into the hood to give clearance to the blower. A hood scoop should not be used because the engine just sets up too high.

In cutting the bubble top, be extremely careful not to crack the plastic. Make the cut on an angle sloping toward the front and save the "windshield pods" you have left over.



TABLE TOP RACING SECTION

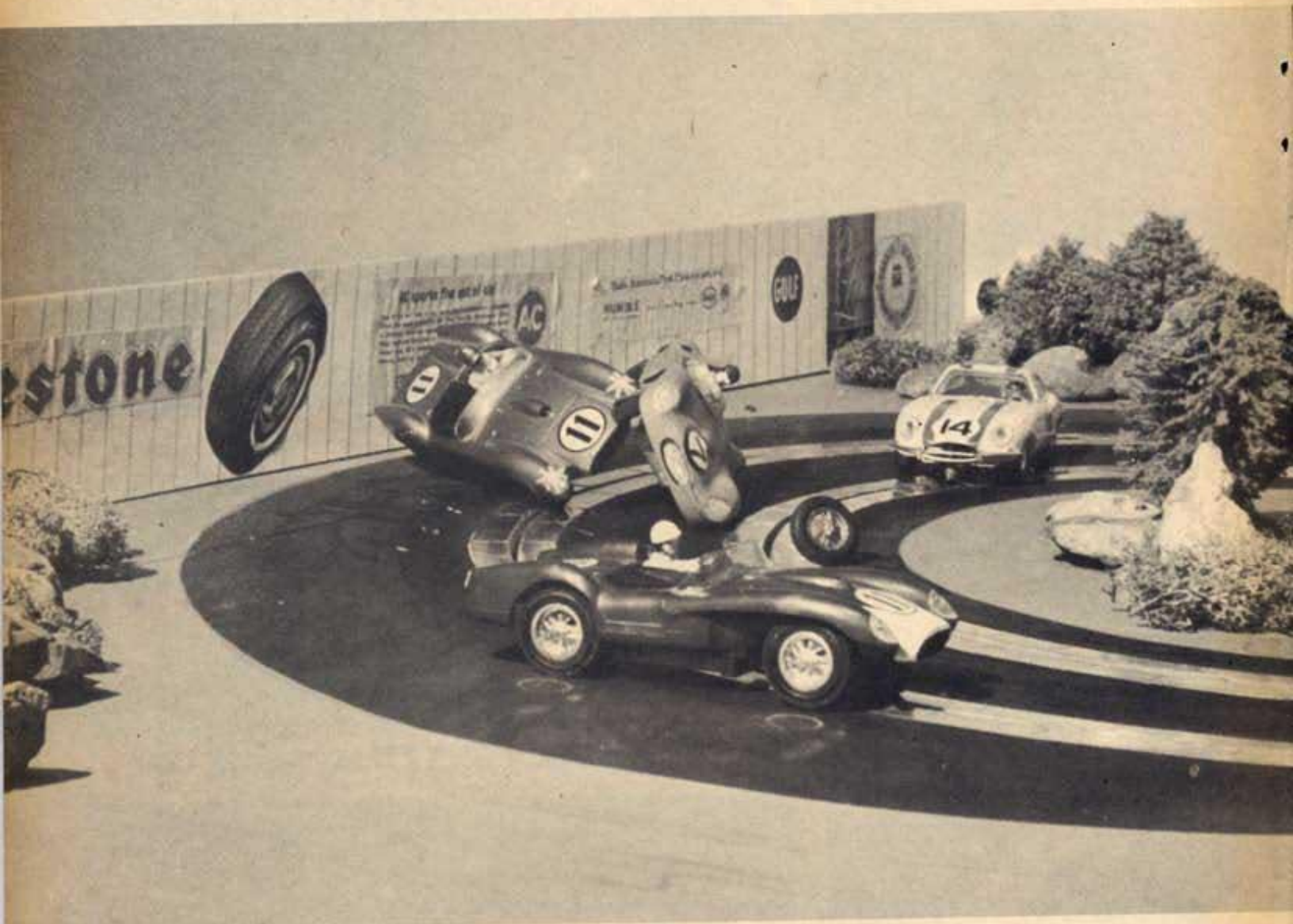


PHOTO CONTEST

Each month Model Car Science will award valuable prizes to the readers who submit the best photos of slot racers in action. Send your photos to: Table Top Photo Contest Model Car Science, 171 Barrington Pl., Los Angeles 49, Calif.

**THIS MONTH'S
PHOTO CONTEST
WINNER IS**

**KENNETH M. PRICE
7706 WESTROCK ST.,
SAN ANTONIO 27, TEXAS**

SLOT RACING CLUB & TRACK DIRECTORY

Alabama

G.B.A. Slot Racers Club, Rt. 1 Box 166, Grand Bay.

Dixie Raceways, c/o T. Peddy, Box 244, Loachapoka

Arizona

Warwick Slot Racing Club, 6760 Nelson Dr., Tucson

Centennial City Model Road Racing Club, 915 Middlebrook Rd., Prescott

California

Model-Rama Raceway, 826 E. 1st St., Santa Ana, Phone 547-1142.

Tandem Hobby Shop, 13862½ Chase St., Panorama City.

Bob's Hobbies-Crafts, 2226 E. 4th St., Long Beach 14, Phone: GE 9-6320.

Babcock Research & Development, 836 S. La Brea, Inglewood.

Rustic Oak Slot Racing, Hiway 9, Felton

Oxwood Raceway, 6015 Woodman Ave., Van Nuys

South Bay Raceways, 1213 Hermosa Ave., Hermosa Beach Phone 367-2811

International Hobbies, 1809 Lincoln Blvd., Venice

International Hobbies, 2302½ Artesia Blvd., Redondo Beach

Le Mans Hobbies, 3909 Sepulveda Blvd., Culver City

Ventura Hobbies, 11746 Ventura Blvd., Studio City, Phone 769-9828

Alamo Raceway, J & R Variety Store, 5 Market Plaza, Alamo, Phone: Area 415-837-9906

"The Sleepers," Rt. 4, Box 403, Lodi

Marina Raceway, 12001 Venice Blvd., Los Angeles 66

5th Ave. Hobby Shop, 2505 W. Manchester, Inglewood

R. E. Owens, 666 North Tustin, Orange

Pico Drag Center, 9316 E. Whittier Blvd., Pico Rivera

Ecurie Concours Model Car Racing Club, c/o Norman O. Davis, 4522 Madoc Way, San Jose

Pioneer Raceway, 13331 Telegraph Rd., Whittier

Hobby Shop, 145 S. Pacific Coast Hwy., Redondo Beach

Howard's Hobby House, 1624 Contra Costa Blvd., Pleasant Hill

Hobby Rama, 826 E. 1st St., Santa Ana

Don Thompson's Hobby Raceways, 9630 Las Tunas, Temple City

Golden Gate Model Road Racing Club, c/o Ken Reilly, 326 Virginia Ave., San Francisco

Antelope Valley Hobby Center, 45013 N. Yucca Ave., Lancaster

So. San Joaquin Slot Racing Ass'n., 4022 University Ave., Bakersfield

Anaheim Miniature Auto Racing Ass'n., 1158 N. Catalpa, Anaheim

Western Model Raceways, 13204 S. Western Ave., Gardena

Telco, Inc., 4718 E. Home Ave., Fresno

Fresno Hobby, 3033 Tulare St., Fresno

Sebring Miniature Auto Racing, 8504 Garden Grove Blvd., Garden Grove

Miniature Racing Center, 1526 Del Monte Blvd., Seaside

D & S Hobby, 184 San Antonio Rd., Mt. View

K. P. Hobby Shop, 7716 Beverly Blvd., Los Angeles 36

International Raceway, 1545 Locust St., Walnut Creek

Marina Raceway, 12901 Venice Blvd., Venice

J's Junction Hobby Shop, Oxwood Raceway, 6015 Woodman St., Van Nuys

Colorado
Aurora High Model Club, c/o Stan Reeves, 10th and Newark, Aurora 8

Rocky Mountain Miniature Racing Association Model Hobby Shop, 38th and Federal Blvd., Denver

Scale Model Engineering Club, Science Dept., Euclid Jr. High School, Littleton (Denver South)

Connecticut

House of Hobbies, 22 Nashawena Ave., West Haven

Illinois

Heckler, 536 Stange Ave., Springfield

East Coventry Race Course, 1328 Madison St., Evanston

Aurora Cycle & Hobby Center, 68 S. Broadway, Aurora

Speck's Bike & Hobby Shop, 328 E. North Ave., Northlake

Indiana

Raceland Miniature Raceways, 2107 W. Washington St., Indianapolis

Iowa

Sunnyside Racing Association, 2301 Gear, Burlington

Marshall Miniature Speedway Association, 13 North 1st Street, Marshalltown

Bob Diekmann (GP Road Racing Track), 1221 Commercial St., Algona

The Hobby Shop, 716 10th St., Marion

Kansas

"Sainty Ram Rodders," Located basement of First Methodist Church, St. Francis

Slot Hawks, c/o Herbert Williams, 2009 Clare Rd., Lawrence

Pitt Strippers, 208 E. 23rd St., Pittsburg

Kentucky

Frankfort Ave. Toy & Cycle, 2644 Frankfort Ave., Louisville

Louisiana

The Hobby Guide, 4513 Freret St., New Orleans 15

Massachusetts

Witch City Model Car Club, c/o Roger Demers, 18 Silver St., Salem

Mini-Racers, c/o Herb Phinney, 52 Thistle St., W. Lynn

T. Rowe, c/o "The Ramchargers," 87 Congress St., Orange

Lake Side Raceway, Lake Attatish, Anesbury

The Ace Racing Club, c/o John O'Brien, 12 Witt St., Lynn

"The Revers," c/o R. Ward, 10 Thistledale Rd., Wakefield

Bill's Hobby Land, 245 Essex St., Salem

Michigan

Ford Auto Speedway Track, 381 Brentwood Dr., Inkster

Top Track Hobby Shop, 6871 Middlebelt, Gardena City

Seaway Speedway, 2700 Fort, Trenton

Accurate Mower Repairs, 2643½ N. Cicero Ave., Chicago

Minnesota

The Dukes of Oil, 1009 W. 13th St., Wilmar

Missouri

The Ecurie Liberty Club, 906 West Hiway 10, Liberty

Dunn's Den, 7114 Prospect, Kansas City

Keencraft Hobby Center, 5300 E. 24th St., Kansas City

New Hampshire

Charleston Model Road Racing Club, Box 296, Charleston

New Jersey

Richard Erickson, 517 80th St., North Bergen

Totowa Hobby Shop, 388 Union Avenue, Paterson 2

Instant Speedway, 649 Laurel Ave., Hazlet

Colonia Speedways, 70 Berkeley, Colonia

Tiny Tots, Inc., 236 W. Front St., Plainfield

The Model Roadracing Club of Elizabeth, 482 Rahway Avenue, Elizabeth

Richard N. Hughes, 45 Hemlock Road, Short Hills

New York

Hobby Haven, 688 Winton Rd., N Rochester 9

Frank's Speedway, 4263 Cameron Drive, Williamsville 21

The Scavengers, 540 Morris St., Albany 8

Newark Slot Racing Club, 124 Rose Dr., Newark

Robert Haroutunian, 90 McLean Ave., Yonkers

Matthew Purzycki, 26 Purdue Rd., Glen Cove, L.I.

North Carolina

Tommy Poe, 4801 Hardwick Rd., Charlotte

Catamba Auto Modeler's Slot Division, 516 Belmont Rd., Belmont

Bill Scott, 5301 Randolph Road, Charlotte

Ohio

Jerry Osborne, 6127 Hammel Ave., Cincinnati 37

Lakewood Scale Model Raceways, 17114 Detroit Ave., Cleveland

Carroll Course, 2729 Cypress Way, Cincinnati 12

Forest City 1/25thers, c/o Ron Smith, 3344 Linden Rd., Rocky River 16

Lusch TV and Hobby Shop, 812 Bennett St., Marion

Oklahoma

Speedcraft Hobby Center, 700 N. Main St., Owasso

Oklahoma City Slot Racing Ass'n., Eureka Enterprises, Inc., 2712 N.W. 10th St., Oklahoma City

Oregon

Northwest Scale Racing Association, 1728 N.E. 40th St., Portland

Western Scale Speedway Ass'n., 480 Minnesota St., Lebanon

Miracle Miles Slot Club, Highway 101, Box 643, Taft

Pacific Northwest Miniature Racing Ass'n., 426 State St., Salem

Pennsylvania

SYC Racing Club, 615 Clay Ave., Scranton 10

Carmichael's Slot Car Racing Ass'n., 212 Pine St., Carmichael

Baby Town Toys, Germantown Pike & 202, Norristown Sq., Norristown

South Carolina

Model Auto Racing Association of Columbia, 1801 Green St., Columbia

Tennessee

Hobbycraft Hobby Shop, 4003 Hillsboro Rd., Nashville 12

Texas

Ohmco Raceway, 837 W. Davis, Dallas

C. K. Beck Co., 1420 N. McCullough Ave., San Antonio

S & L Raceway, c/o James Smith, 717 So. 11th, Temple

Austin Scale Road Racing Ass'n., 1702 Red River St., Austin

Washington

Parkers, Burien Hobby Center, 619 S.W. 152nd, Seattle

Empire Hobbies & Crafts, 6740 Empire Way South, Seattle

Wisconsin

Settra, 2024 N. 48th St., Milwaukee

Road Angel Auto Club, 1056 Elmore St., Green Bay

Oklahoma Hobby Shop, 1103 W. Oklahoma Blvd., Milwaukee

Tri-City Dragway, c/o Dennis Schmidt, Box 216, Stratford

Canada

Maxport Slot Car Racing Club, 5 Sellmar Rd., Weston, Ontario

Rigby's Variety Shop, 3847 Bloor St., West, Islington, Ontario

Tom Carter, 53 Columbia St. W., Waterloo, Ontario

Etobicoke Model Racing Car Club, Rigby's Variety Hobby, 3847 Bloor St., W. Toronto

Maxport Racing Club, 5 Selmar Ave., Toronto

Klein's Hobby & Sporting Goods, 3187 Bathurst St., Toronto

Joe's Hobby Shop, 1616 Gerrard St., E., Toronto

SLOT RACING IN THE MIDWEST

by Dick Dobson



MILWAUKEE'S GRAND PRIX, The Kleine Autosport Rennen, looks like a great success. Pierre Perrin was down to see me a few weeks back and told me that entries have poured in from Detroit, Glenwood, Lombard, Rockford, and Aurora, with some nibbles from places such as Grand Rapids, Ann Arbor, and some newer groups around Milwaukee. Most of the Milwaukee group will be there in full force. I'll have a full report next month on the results of the race with some pictures of the winners.

It isn't often that I have a good excuse to talk racing all night and all the next day, but I did recently when Pierre was here in Rockford. While in town, he stayed for supper, gabbed awhile, and was ready to head for his motel at about 1:30 A.M., when he found to his surprise, that his V-W was all but buried in a four foot drift of snow in my drive-way. When you talk cars the world outside seems far away.

Next race in this area will be the Motor City Grand Prix, held on Member Don Lupp's track. I'm looking forward to this one, for Don and I seem to always fight it out for third place. He always nerfs me and blasts on to leave me dead last. For more info,

write Don at 306655 Westfield in La-
vonia, Mich. The race has been set
back until early June, for those who
would like to go to the Indianapolis
"500."

From Grand Rapids, Jerry Blocker reports that the local club has just completed a 110 ft., four lane track, with 20 ft. straights. The club is also interested in hosting a race later in the season, if a schedule can be worked out. Those of you near the Grand Rapids area can reach Jerry at 1030 Sweet, N.E., in Grand Rapids.

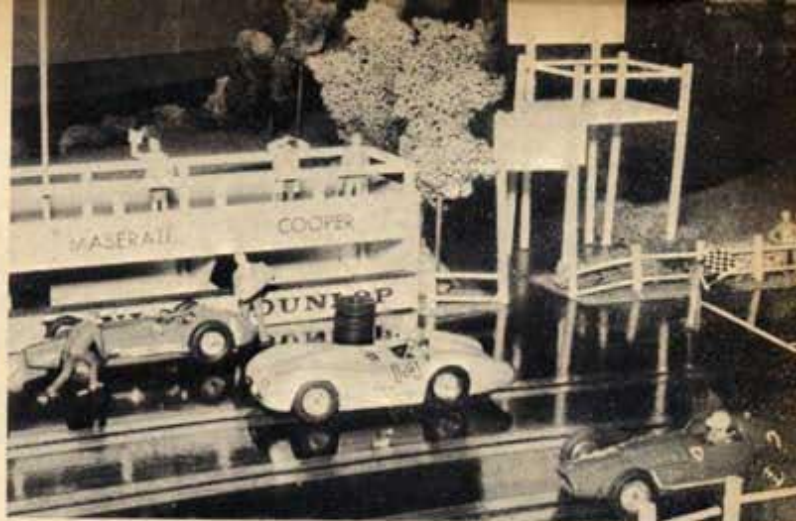
Speaking of schedules, this is one thing that the NASRRA representatives will be talking about in Milwaukee. A complete schedule will be worked out for the rest of the year, and hereafter, the season's races will be planned long in advance so it will be easier to work all the events into your personal routine.

Bill Shew from Jacksonville, Illinois informs me that the Mini-Com-Car club in Edwardsville, Ill. is running a "Stock" class for beginners, along with the usual events. Those in the area can get more information from President John Autenrieb, Kansas Street, in Edwardsville, Illinois.

Store racing is taking hold around

here finally. A couple shops on the South side of Chicago and one in Alton, Ill. have added tracks along with a selection of racing supplies. This can be a real boost to the sport, if done right. To those just getting into the game, it will help greatly in the long run to get some suggestions from a local club about location of the track, construction of the track, and all the other aspects that go into a good layout. It might be a worthwhile proposition to let the local group run the events one night a week, provided that they already have a good organization. In this way, the newcomers to the sport can learn from watching how real organization and a racing program pays off for everyone.

The Rockford Scale Raceways club has managed to survive without much support from the local hobby shops, although they are finally realizing what a potential market exists. Meetings are every Tuesday night and are rotated among the three privately owned tracks. The club's goal is to be able to afford a club room in which a really large track could be built. This would be ideal, since it would be available to all, anytime, however with rent, heat and track costs, it may not happen.



One of the oldest known active clubs in slot racing, the Rockford Scale Raceway of Rockford, Illinois bases some of its happy growth on active participation by all of its members.

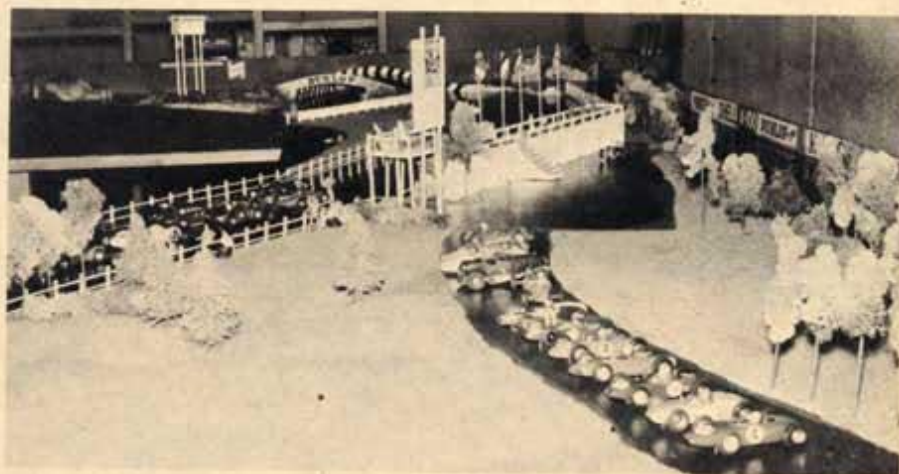
After struggling along with a rail track for a year or so, we decided to go to slot after seeing Scalextric's first slot track.

I built a small three lane track, routed in masonite, with the pick-up material hand cut from brass shim stock, there wasn't any tape available at the time. On this track we held our first meeting of the present club. From this beginning, interest arose, and some of the other clubs in the area switched to slot.

Eric Heaselden built Curzon Park, a 50 ft. three laner that really seemed huge to us in those days. Curzon Park was then moved to Gary Strauss's house, and he and Jim Klipping proceeded to lengthen the straight and insert an esses in the secondary straight. This seemed to increase the lap to about 60 ft., with approximately 20 ft. straights. At the end of the straight, the track esses into a sweeping right that can be taken real fast, then a short straight and thru the esses. A fly-over bridge is next, that you do if you overcook it!

Tom Wojohn's "Poverty Flats" circuit is a 60 ft. three lane with a 20 ft. straight. Tom's track has some nicely done scenery that really adds to the realism. After blasting down the main straight, you brake hard for a sharp left, about 4 feet, another left, thru the esses, and over a treacherous bridge. Once over the bridge you can turn it on again if you can get your car pointed right and dig down a short six ft. section, then a 180 degree right and into the main straight. Lap times are in the six second range with 5.2 being the absolute record.

Don Olson has just completed a 60 ft. four lane track, routed out of particle board, really a nicely done job.



About sixteen ft. long in the main straight, with lots of little kinks and short straights that really keep you on your toes, a real driver's course!

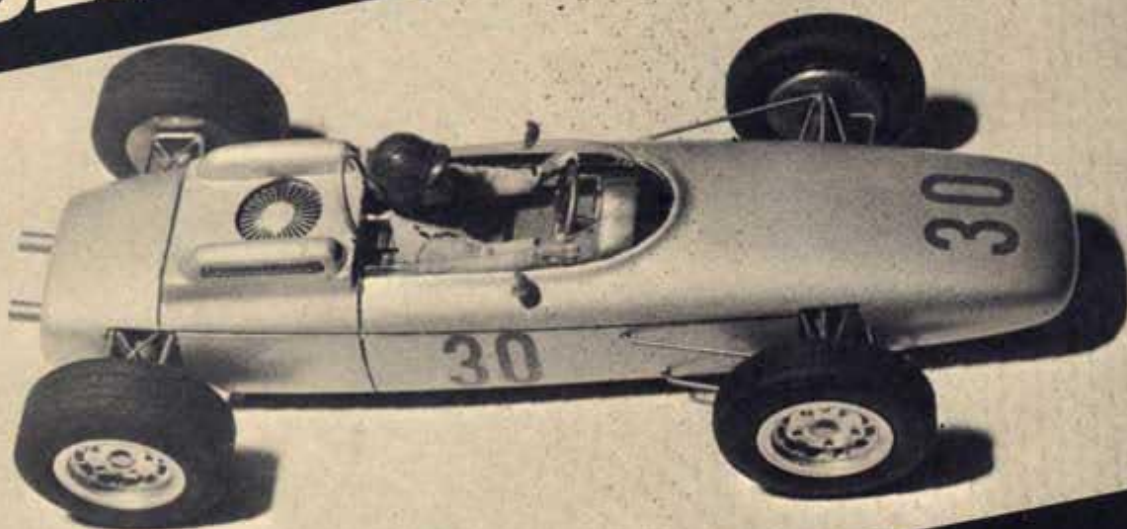
All the tracks are wired for dynamic braking, with three circuit phone plug connections for hand controllers. The surface of all the tracks is of the gloss variety, giving excellent traction. A portable lap counter is wired to plug into each track, and an automatic timer is now being built, that will give us the time of any lane at the throw of a switch.

For the last four years the Rockford Club has been host to one or two

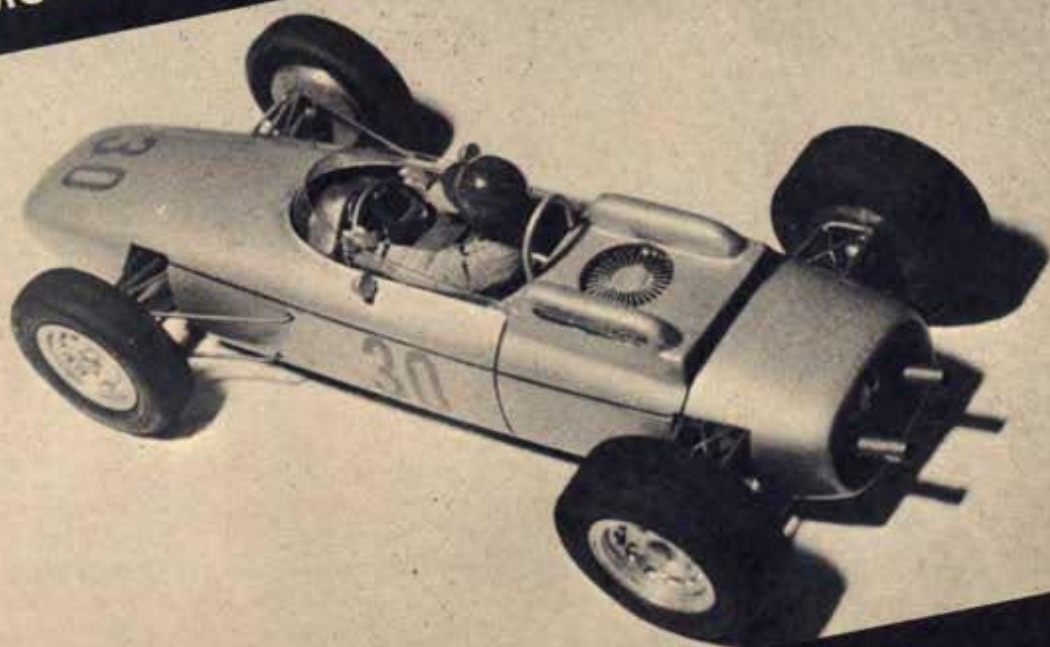
large invitational meets each year. This, along with the races other clubs have held in the midwest, has helped the sport continue to grow in a well organized way. With a set of rules established under NASRRA, and a racing circuit set up, the enthusiasts in the midwest know what to expect when they go racing. Everyone is competing on an even level, on tracks that are similar in character.

Those big Grand Prix are a real test on the nerves and the cars. I have my aspirin and Murine bottles packed in with the other equipment, and I'll see you at all of them.

MOTORIZING 1/32nd Formula 1 Cars



TRY THESE EASY-TO-FOLLOW STEPS FOR A
MORE AUTHENTIC LOOKING SLOT RACER



by Dick Dobson

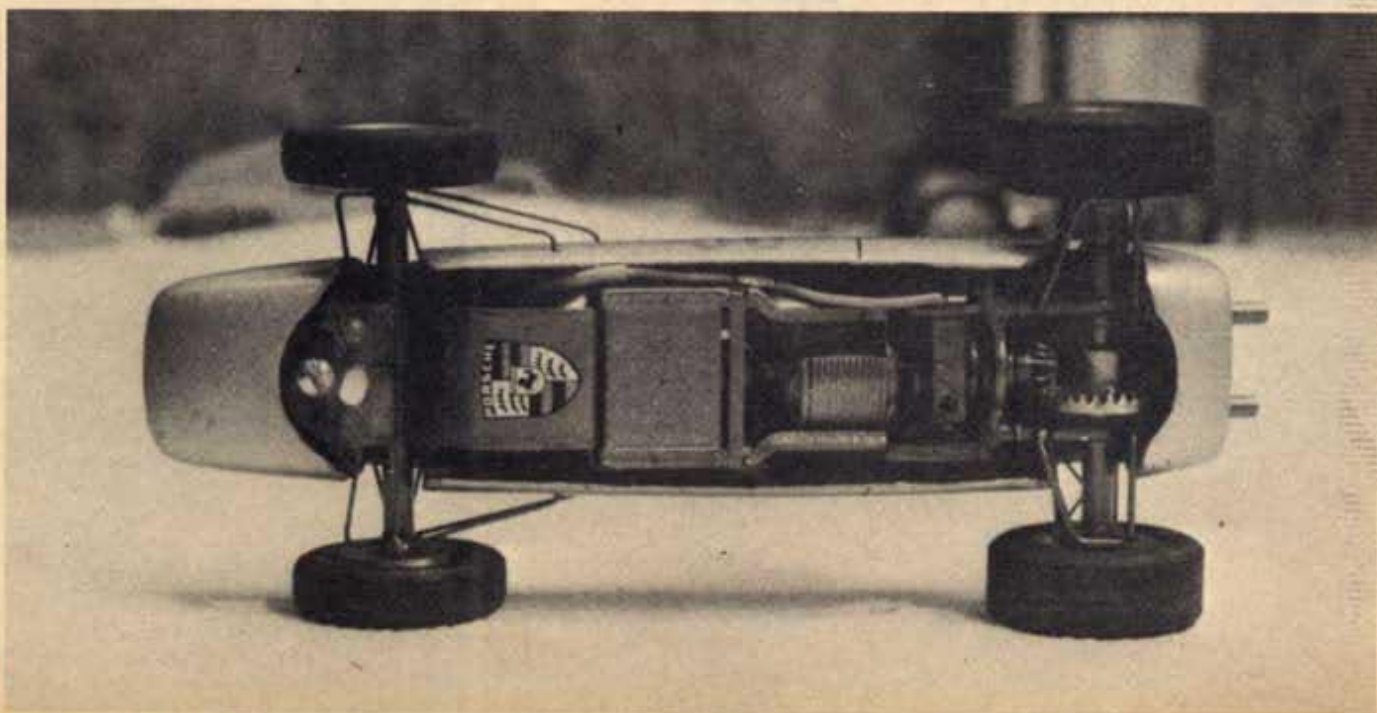
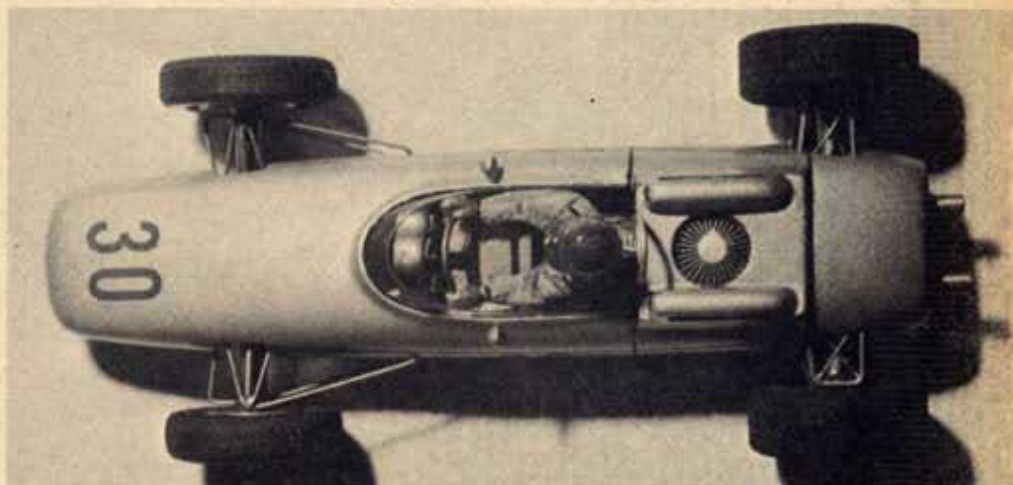
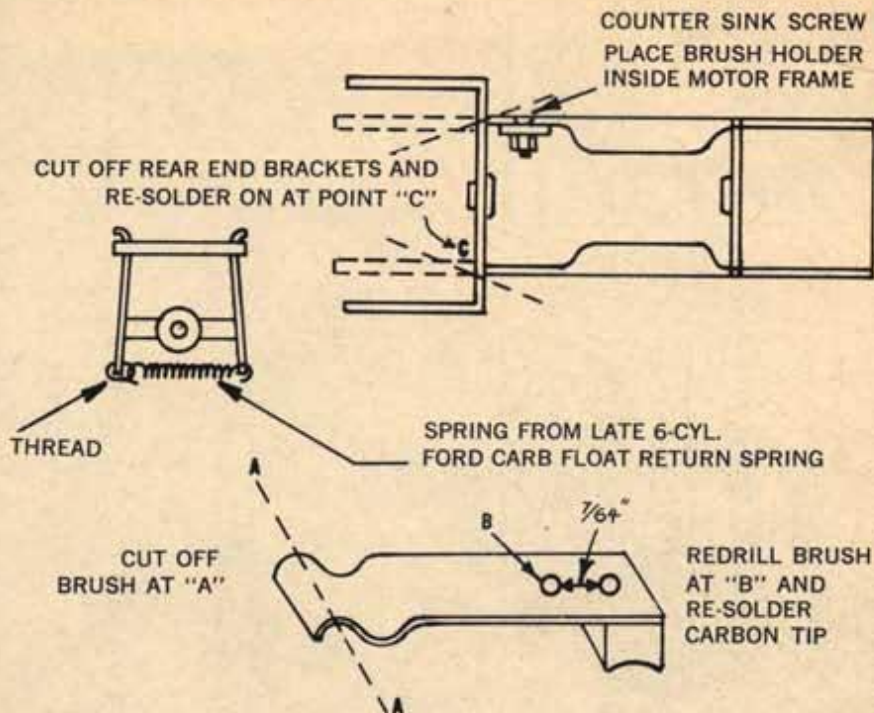
WHEN MODELING the current Formula I cars in 1/32nd scale, getting a decent motor inside the body can sometimes be a real problem.

The rear brackets can be sawed off a Pittman DC 196 and soldered on, closer in on the rear of the motor. The brush holder and spring still stick out quite far, so here is a fairly simple solution.

Cut the brush arm off at point "A" as shown. Carefully unsolder the brush tip from the arm, being careful not to disturb the solder that remains on the tip. The solder that is on the carbon will stick to it but I have never been able to add any to it, must be a special flux required. Drill a #50 hole $7/64"$ in from the old brush tip hole. Resolder the carbon tips in position. If you use the 196 carbons, they will have to be cut down, however 195 carbons will work fine. Most of us have gobs of obsolete 195's.

Next, remove the brush holder and countersink the hole in the motor frame. Remount the brush holder inside the frame, using a 2-56 flat-head bolt and nut.

The brushes can be mounted and the old tip holes can be used to fasten a tension spring. One source for a perfect spring is a late model 6-cyl. Ford carburetor float return spring. Available at carb and electric repair shops. One end of the spring can be hooked directly to the brush arm, but the other end *must be insulated*. Elaborate systems can be worked out but I simply use a piece of thread, this way you can run the motor and keep tightening the slip-knot until the revs sound right, note the position of the spring and thread and do it up permanently.





BY BILL SIPPEL

SCALE RACEWAY MODELS

Model Car Science track tests are performed on cars taken from sets, not on the sets as normally used in the home. The reason for this is to see if the cars can be used on tracks that conform to international rules. Secondary reason is to determine what improvements can be made with a minimum expenditure. The improvements suggested here will usually apply to home use also, for those considering nothing else.

For those liking little cars with lots of detail, SRM of England could well be what you have been looking for. Although they make a complete set, track, controllers, power pack etc., we will mainly concern ourselves with just the cars. The series at this time are of the current Formula 1 Grand Prix cars in 1/40 scale. They are well detailed and have many features such as steering and action suspension. Let's look them over.

At this moment, SRM has released the BRM and Cooper. To follow are the Lotus and Ferrari. The bodies are well done and include a driver, windscreen, mirrors and roll bars. The body is in two halves so that when assembled with two screws they make a complete shell with full underside included.

In taking the body apart, we find a front end made of nylon with full steering. The main axle is pinned in the center and this presses through the body underpan to hold it and also form the rigid guide pin. On the axle ends are pinned spindles with the tie rod arms running forward. The tie rod drops over the arms pins and has the moving forward guide pin at its center. The total unit has been kept very miniature in size so the flex resulting gives springing motion with the steering.

The rear end is all nylon, including the gear and plugs into the nylon rear section of the motor. Cast onto the motor brackets are the simulated A-arms, coils, and shocks to give more realism. The axle, being nylon also, is free to flex slightly, thus giving a springing action in the rear. The nylon crown gear has 27 teeth and, when mated to the motor brass pinion of 8 teeth, provides

a 3.375 to 1 ratio. The motor has some good approaches and was designed to fit the car and do the job. The magnet is located at the rear of the motor, where the rear end plugs into it. The pinion shaft runs through the magnet and the commutator is at the opposite end from the gear, as it should be. The armature is 3-pole. Pole pieces follow straight through in their curved pattern, as the magnet has been circular shaped at this point, being sufficiently larger than the armature to give the desired air gap. The commutator is a circular disk type, as seen in the Airfix and Lionel car motors. The front motor bracket is also cast of nylon and contains the brush and spring carriers. The contact from the motor to the track is narrow copper braid. At the motor it slips through a slit at the end of the brush/spring carrier and contact is maintained through the spring, pushing it tight to the carrier. At the track end, the wire slips through two slots in the body underpan and fold back to contact the track at approximately the rear (rigid) guide pin. The motor and rear end are held into place by proper matched shaping inside the body halves.

The wheels are proper for the given car. They are of a medium hardness,

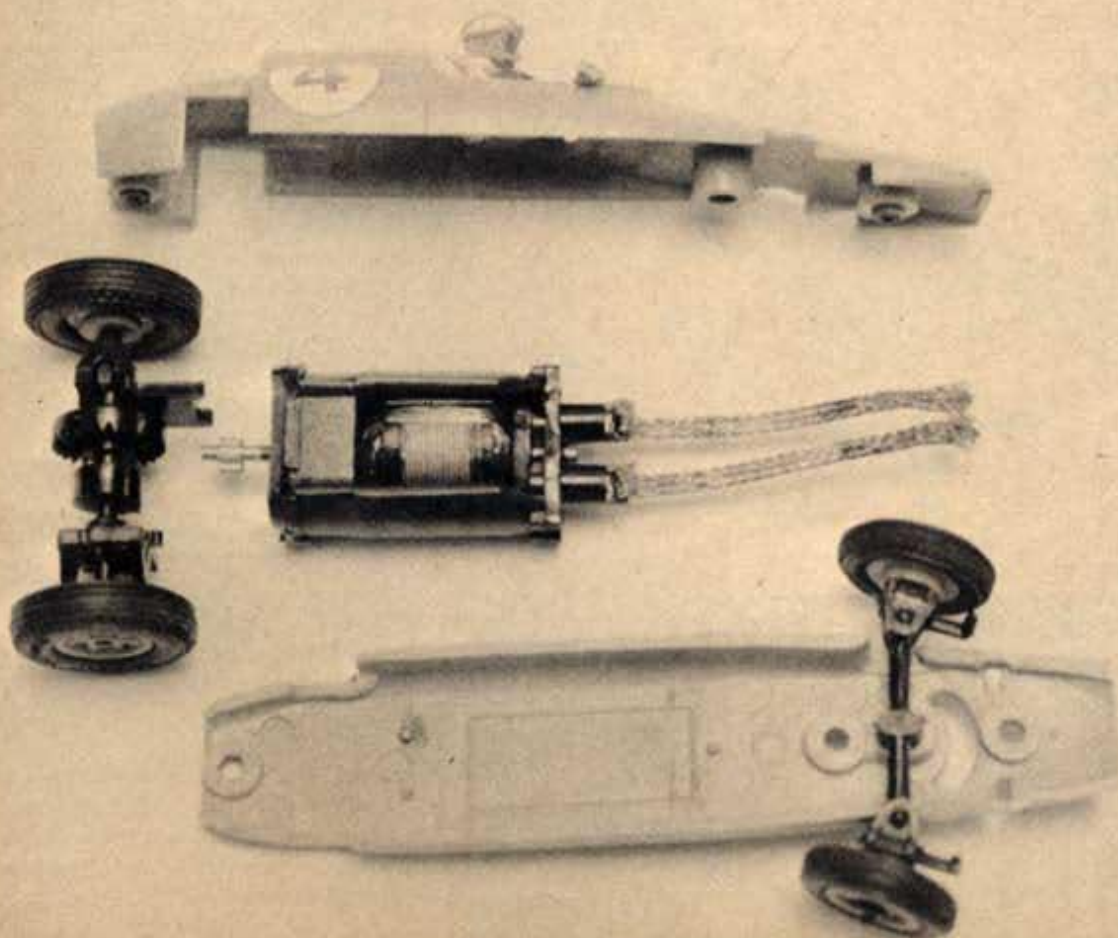
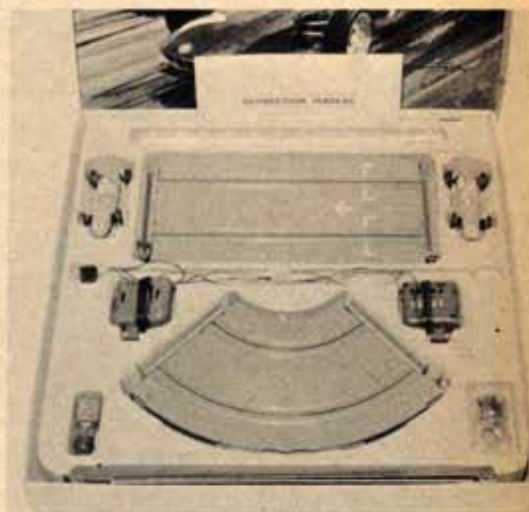
are treaded and well detailed. SRM cars come with the driver painted and number decals attached.

Quickly about the set itself: The track is well done with a good locking system. It forms a basic figure 8 when assembled. Contacts are 1/8" wide, as is the slot, and brass. Controllers are rheostats with a locking unit so they can be set at any speed or be used manually. The whole assembly, from controls to transformer to track, is plug in. Included also is fencing, a lubricating oil, and of course two cars. Recommended power for the set is 12 volt D.C., 1 amp.

As for running the cars, we did not set up the factory set but rather ran them on our normal test track. The contact wipers had to be brought in closer to the guide pin but otherwise no modifications were needed. The cars ran very well and did not tend to heat up. It was a little hard getting used to driving them, due to their size and steering. The steering, as in all models that steer, limits the amount of layout in a turn. When the guide pin on the tie rod reaches its maximum movement in a turn, the two pins bind in the slot. After a few laps, and getting used to the light weight and amount of laying out they can take in a turn without binding, it became a ball.

Nice little broadslides could be controlled, through turns and consistent laps could be run at good speed for the little cars. They show great potential for those working in limited space or wanting large scale lap distance. For those seeking smaller sizes, SRM would be worth looking into.

While there are currently no U.S. importers handling the SRM line, sets can be obtained from hobby shops in England for about \$20.00. This price includes shipping and duties.



SLOT RACER'S

Work Shop

NEW IDEAS IN RACING MODIFICATIONS

CHASSIS VIBRATION TESTER

Here is a simple little device which will help you analyze the amount of vibrations in your running gear. Any irregularities in tires, shafts and wheels can be easily detected and

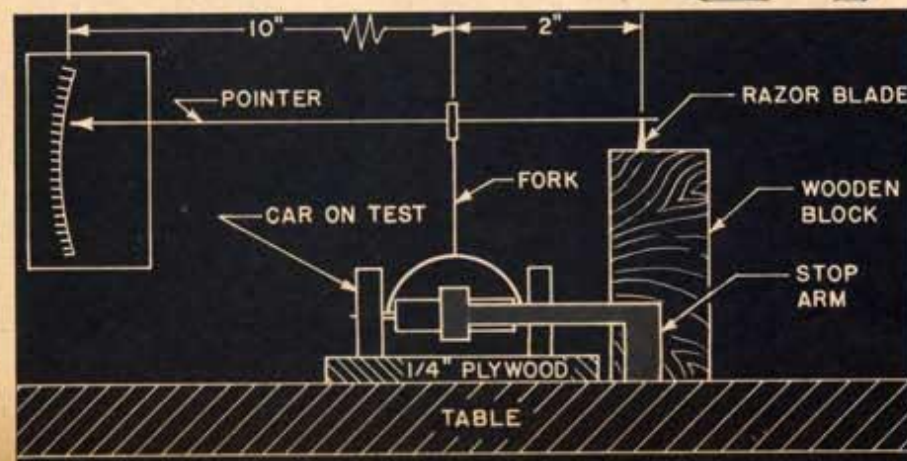
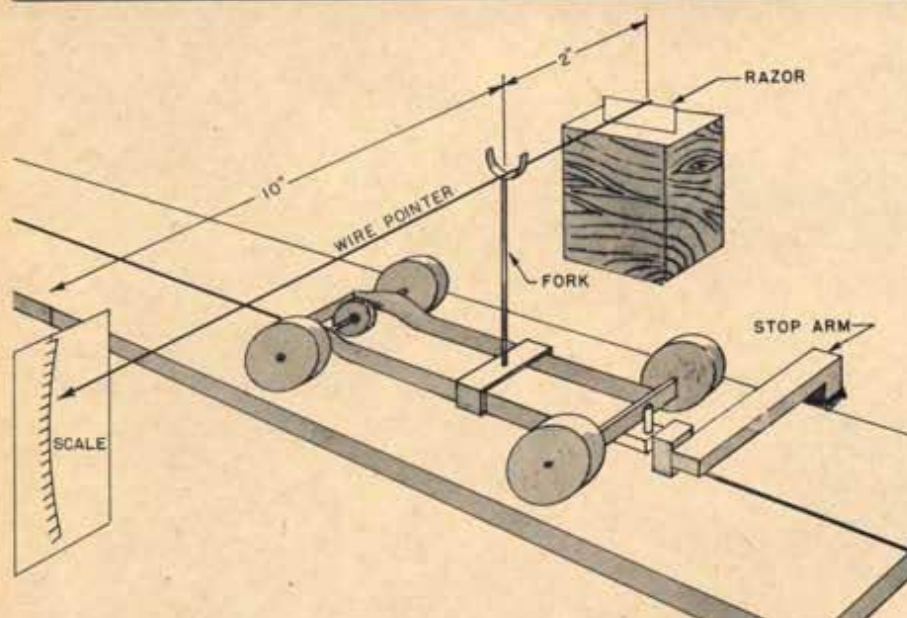
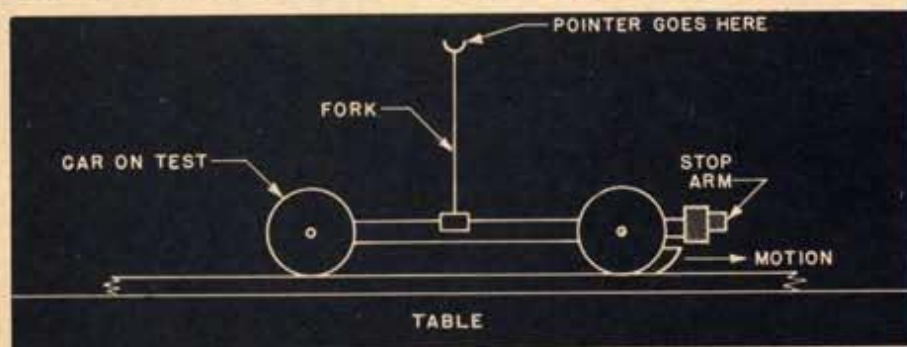
later, corrected. The parts are made from scrap wood and pieces of wire.

The basic principle is this: The motor is taken out of the chassis to prevent gear vibration (which is at a

much higher frequency than chassis vibrations) from obscuring the readings. The chassis is placed on a 1/4" thick plywood strip (3-1/2" wide and 12" long). This strip, with the car on top of it, is placed on a smooth table. A small arm is fastened to the table to reach over the plywood strip and hold the car stationary while the strip is slid along gently. A fork made of coat hanger wire is placed on top of the chassis. A foot long pointer (coat hanger wire) has a razor blade fastened on one end of it. This pointer rests on the upper end of the fork. The far end of the pointer reaches a cardboard scale while the other end (with the razor blade) rests on a wooden block on the table.

When the plywood strip is slid along on the table the car's wheels will rotate but the car will not move due to the Stop Arm. If there are any irregularities in the wheels or tires, the fork will move up and down. This movement will be transferred to and magnified by the pointer, six times. Thus an accurate indication of irregularities will be obtained. The different positions of the pointer can be marked on the scale. Whenever the pointer rides up high on the scale it indicates a high spot on one of the tires and vice versa. The fork can be moved near the front or rear ends of the car to pick up irregularities in those areas. We are not interested in the absolute magnitude of the irregularities, only the relative magnitudes and approximate locations. Several readings have to be taken with the axles being rotated into different relative positions every time.

The 2 inch-to-10 inch ratio can be varied to a higher ratio to improve accuracy of indications. (Say 1":20") When the pointer does not indicate any irregularities the motor can be replaced and you will have a wobble and vibration free, sweet running slot car.



A new source for power-plants

Don't throw away that broken mechanical toy, it may contain a hot motor for your slot car.

The most expensive single item in a slot car is its motor. Many young hobbyists with a limited budget shy away from this sport because of the relatively high cost of the motor. A solution to their problem may be easier to find than you would think. Most mechanical toys are battery driven these days. When the toy breaks or becomes unusable for some reason it is thrown into the garbage can.

These battery-driven toys usually contain a powerful motor suitable for slot cars. A maximum of three batteries supply current to the motor, in other words 4.5 volts would be its rating. When run on conventional 12 volt tracks these motors will deliver amazing performance. Most of these motors are made in Japan.

Carefully remove the motor from its plastic case. Unsolder the wire leads. (Make sure that the soldering iron does not heat up the magnet excessively.) If

there is a pinion gear on the shaft — check it with a conventional crown gear. Usually the toy pinion gears fit the available crown gears without any alterations. If there is no gear on the shaft, measure the shaft diameter so that you can buy the proper pinion for it.

You might have to clean the brushes on the motor. If the holding ears break off from the bending pressure, use epoxy glue to re-fasten the brush assembly. Oil the bushing with a drop on each end and, you are ready to install the motor. Even if the motor is non-operational, put it in your scrap box because one day you may find another one just like it and make one good motor out of two bad ones.

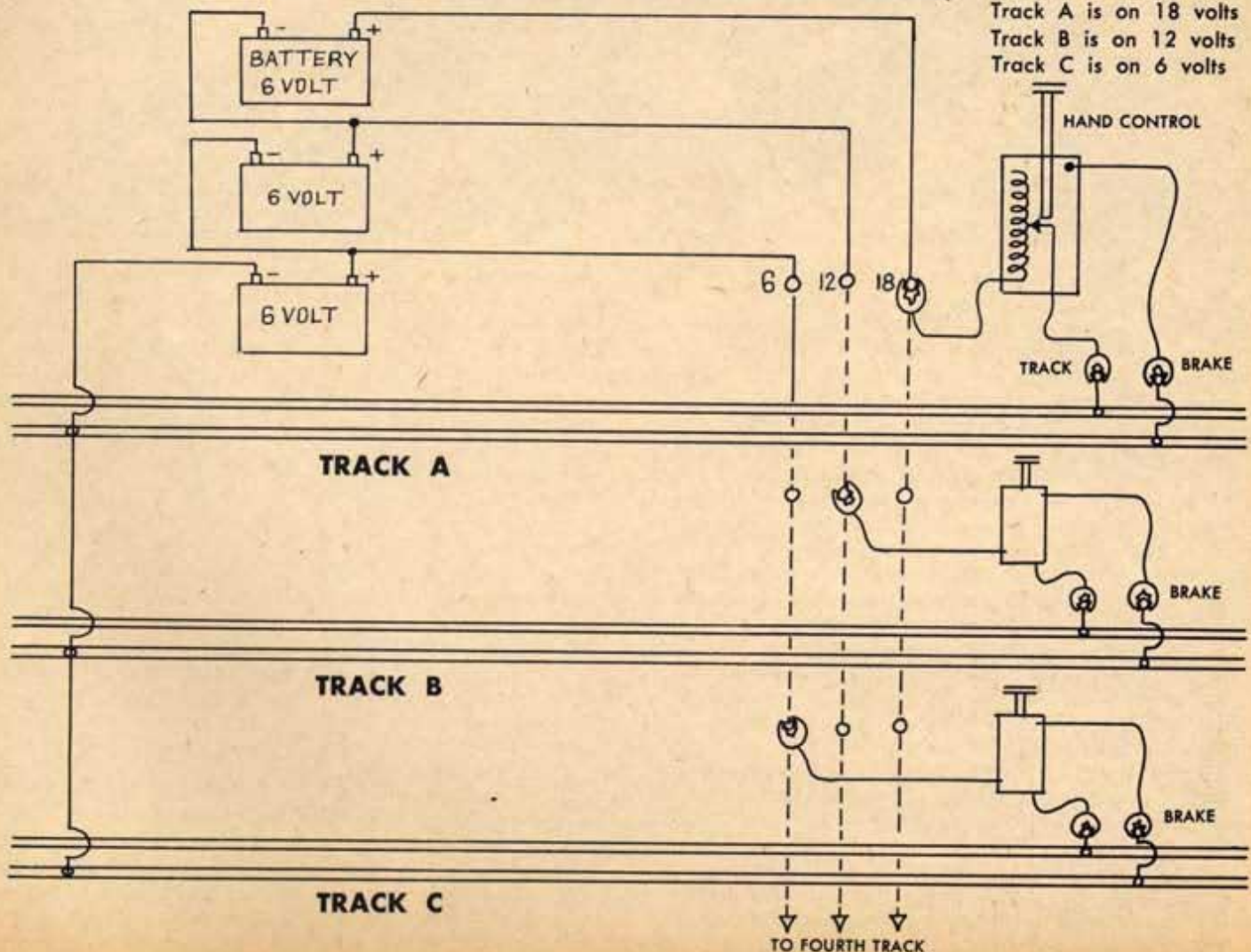
In order to make a suitable chassis for a "re-claimed" motor, use a sheet of aluminum approximately 1/32 to 1/16 inch thick. The chassis has bent-up ears to accommodate bushings for the axles. Cut a recess for the motor and crown gear in the rear part of the chassis. If you are careful, it is possible to align



the motor and crown gear, then epoxy the motor to the chassis. You can also make holding straps for the motor, hold them to the chassis with little screws. If there are bent-up ears cut into the chassis, they form a "cradle" for the motor and keep it in alignment. Soft wire wound around the motor will hold it to the chassis in this case.

Use your imagination in any manner to mount the motor to a good chassis. You will have an inexpensive car suitable for experiments, pleasure driving or racing. This is truly a sporting arrangement on a low budget.

THREE-LANE WIRING DIAGRAM (CHOICE OF 6, 12, OR 18 VOLTS AND BRAKE)

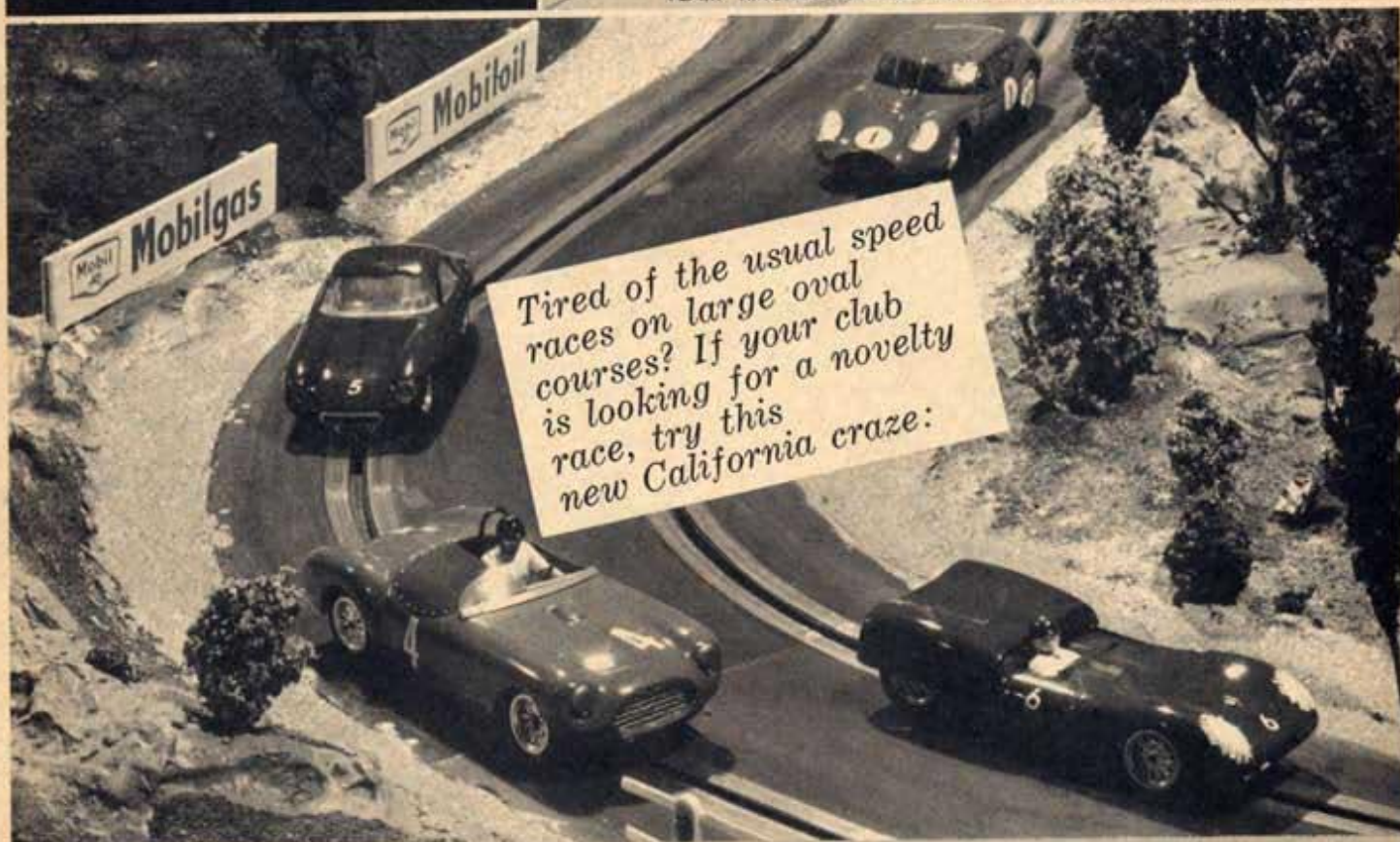


TEAM RACING

By George Siposs



TEAM RACING OFFERS NEW THRILLS ON AN OLD TRACK!



This is a new concept in slot racing and it is finding wide acceptance among the groups that have tried it. The idea is very simple: each driver runs two cars in the same slot. The race starts in the usual manner (under the starting banner) but two cars are on the grid in each slot. As the cars speed away from the start it becomes increasingly difficult to control them since one or the other will be difficult to see. Thus, the driver cannot take the corners at top speed since the same controller adjusts the speed of the other car as well. If too much current reaches one of the cars, it might crash out while the other one is still running. The purpose of the race is to run a prescribed number of laps with *both* cars. It is no use rushing one car because the other one has to complete the same number of laps, and, too much haste might cause accidents. It has been found best to take it easy and drive steadily, keeping an eye on both cars, sacrificing speed for safety.

You will find that the hand control will heat up a bit during the race. This is due to the increased current requirement of the two cars. You can either run shorter races or, connect another hand control as well to the terminals (in parallel with the hand control). Use one control at a time.

The trick is to tune the cars so that they will run at very nearly the same speed. In some courses it is possible to run one high and one low ratio car so that the low ratio can catch up when coming to the slower sections.

For added realism, enter cars of the same make on the same "team." Thus in lane 1, we might find two Testa Rossa Ferraris, on lane 2, there might be two Porsches, on lane 3, a D-Jag and an E-Jag while lane 4, has two Cobras. For night racing you can

put colored lights on the top of each car, each color designating a different team.

In real racing, factories enter a team of cars. It is to their advantage to have as many of them finish as possible. We all remember the sweeps of Ferraris, Cobras etc. In model car team racing, both cars have to finish the required number of laps to qualify. In an extremely long race (say 100 laps) your club may rule that at least 75 laps have to be run with both cars simultaneously. This is to allow repairs to be made on one of the cars while the other is running. When the repaired car is put back on the track, it also has to finish the remaining number of laps! Time is taken from the moment the lead car passes under the starting banner until the second car finishes the required laps. If one car is only slightly faster than the other, you might find it to your advantage to run the faster car behind the slow one and thus have them run nose to tail. Not too realistic but effective.

In addition to the driver (who drives both cars simultaneously), it is permissible to have a "mechanic" on the team who looks after the repair of the cars. Thus when an obviously sick car passes by the pits, the mechanic can take it out of the race and repair it. The main point to remember is that both cars have to finish a certain number of laps. Lap counters will therefore show twice the number of laps. (E.g. in a 10 lap race the counters will show 20). It is up to the judges to make sure that one car does not cover most of the laps while the other puts in a token appearance to make up for the required total. This would obviously make it easier for the driver since he would only have to concentrate on one car at a time.

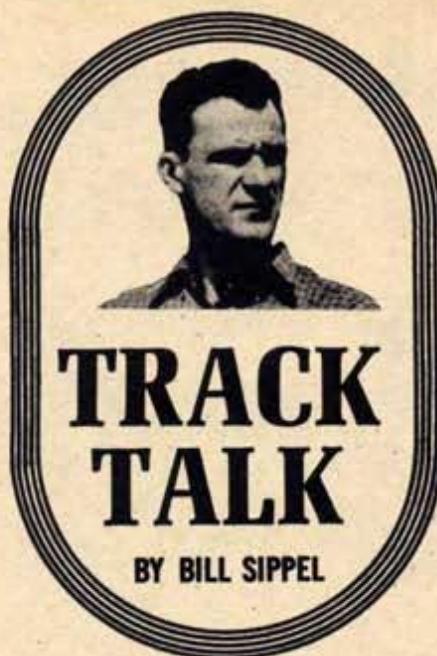
IN THIS HOBBY of electric model car racing, it is hard to determine a beginner from an old timer in some respects. It is not difficult to purchase components to build a competitive car. A person with good coordination and a sharp car or two can make himself known, quickly. Also, the car itself can not always determine the beginner. This comes about in many cases through a person's handicraft. Many persons who have been shelf modelers for some time that turn to powered cars start right off building concourse type cars. Put the two together and anyone could fool people into thinking they had been in the hobby for years.

What makes the differences in beginners? Many stay at that level forever, building and running very crude machinery. Others that do not start as quickly as those mentioned at the start, do progress quite rapidly. This is usually due to their desire to experiment.

Here are some tips for those new to the hobby and wishing to advance. This also would apply to many who have been with the hobby for some time but have lacked drive.

Don't be afraid to try ideas, no matter how odd they might seem. If you can not disprove them through thought and a little paper work, try them. If there is a real car that you are fond of, but there is no model, try scratch building it. Balsa or soft materials such as sugar pine are good starting materials. You might surprise yourself with the results. Even if you make mistakes they can be repaired through wood and paste putties or even bonding on fresh pieces of wood. Always remember to carve away from your body and the hand holding the wood. In this way you can't hurt anything but the pattern. If you can't come up with anything at least you tried and know. If you do come up with a fair or fine model, the enjoyment will be doubled.

Another thing that can help you advance is trying for realism in the model. If you reach the point of having a model that when photographed could pass for real, you will know you have "arrived." Therefore, if they look great but you don't reach that pinnacle of success you need not feel badly. Even looking at manufactured model kits as an example, only a few makers really do a great job every



time. The same philosophy is applied as applied in their cases.

In doing a car in a realistic way, you can research it in advance through automotive magazines and papers. You can pick up the detail of the car as well as the measurements. You can find exhaust pipe shapes, windshield shapes and angles, how high the driver's head sticks out of the car, the wheel type and pattern, tire sizes, filler caps, etc., etc. Also, if you want to duplicate an exact car in every way, you will need to research the color and car number and positioning used during that particular time. You'll be surprised at the final results over your past models.

In trying the various suggested ideas you will rapidly find other pleasure. It soon becomes a challenge and can well deepen your interest in the hobby. It seems to work out that those that come into the hobby and run for fun only (nothing against this) and do not go beyond, soon tire of it and seek different forms of amusement, having completely missed the meat of the enjoyment.

Many new clubs, and even some older ones for that matter, become stagnant after a relatively short period. This can come about from boredom, same faces, same cars, same winners, same losers. This situation can be changed in various ways. Encourage new faces, either as visitors or new

members. If you do not wish to increase your club size, then run special meets against other clubs. If there are no other clubs and you are not encouraging new members in yours, help those you are turning away to get together and form another club, so inter-club events can come about. Don't feel bad if the fellow you turned away comes back to haunt you some day. To stimulate new cars have short seasons, say 4 or 5 weeks per season. Then run a different type car, examples, in place of the normal GP class, set up Current F 1, general or normal GP, say about 39 through 58 GP's and Vintage GP. So on with others. This should stimulate building and swap the winners a little. Also, you can stress the concourse a lot more to make a person build better cars. You can bring it into play by having concourse points play a fair amount in scoring. One example used is to take the cars and award points to the top three, that apply to the racing total at the end of the meet. The concourse car must naturally be the one raced. Another system is to take the cars that were in each heat race and have a contest between them, awarding points to the winner (not of the race, but concourse judging), to be added to their point total.

In speaking of the above ideas, I am not just talking to a few sizes, this concept includes everyone. I realize it is easier to detail or build a car that is big, but that does not mean you can not do the same with little ones. You may have to build through a magnifying glass . . . but, you can do it and it is fun. I whittled out a Lotus 19, in 1/48 scale, and it was a ball. Also it is really a kick when someone asks (and they always do where I live), "what's new?" You open your hand and there the tiny thing is . . . they flip . . . Even the big (scale) boys appreciate a finely detailed model, regardless of size.

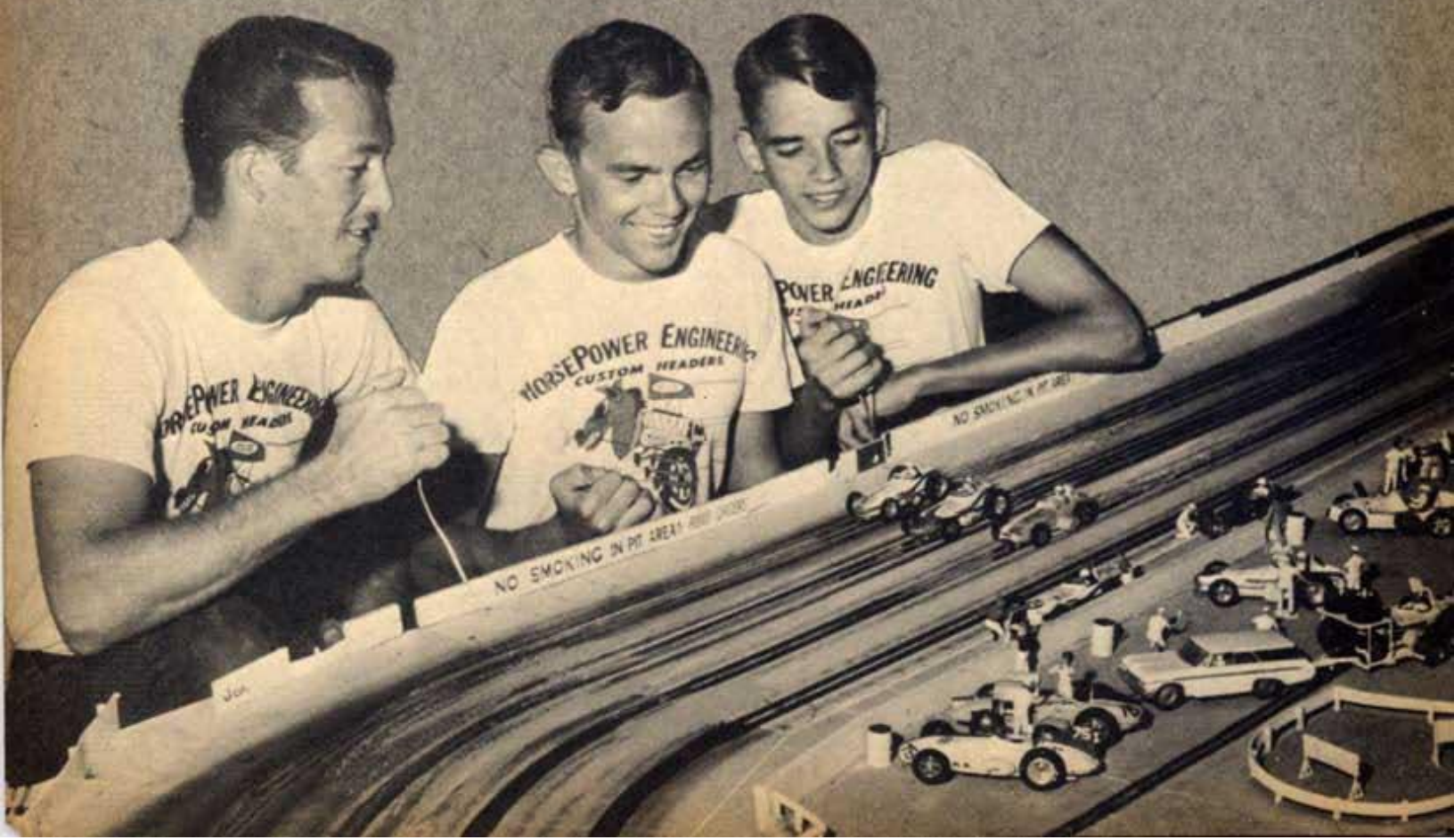
Every club or group running together should have a break during the night. This should consist of some goodies to eat and drink. This is the time for general discussion, new idea and information swapping and gripes. Do not pen things up inside that will grow, settle them while it's fresh and undistorted. This makes for a going and growing group.

If you're ready to think big about slot racing,
here are the facts you'll need to know about...

CLUB



COMMERCIAL
SLOT
TRACKS



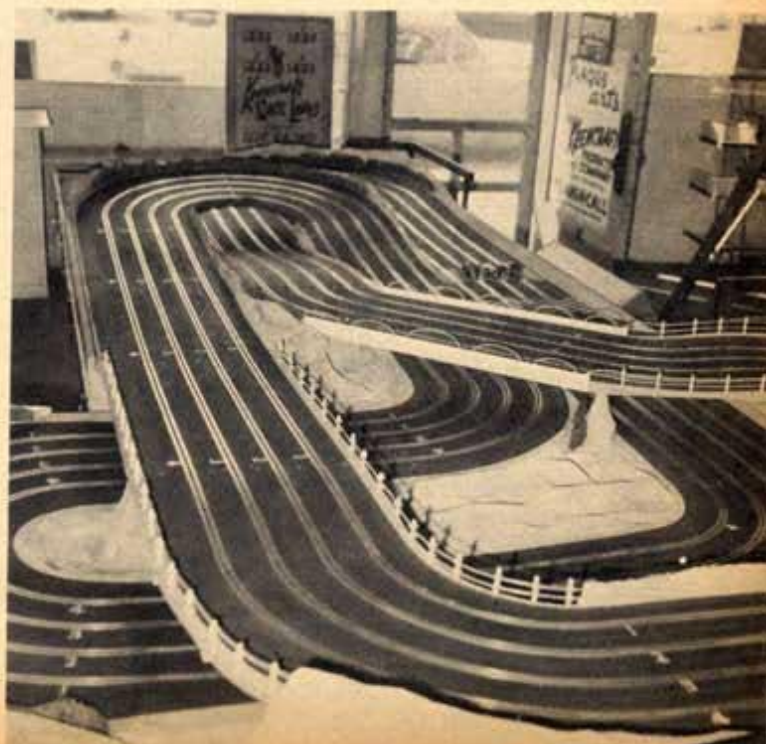
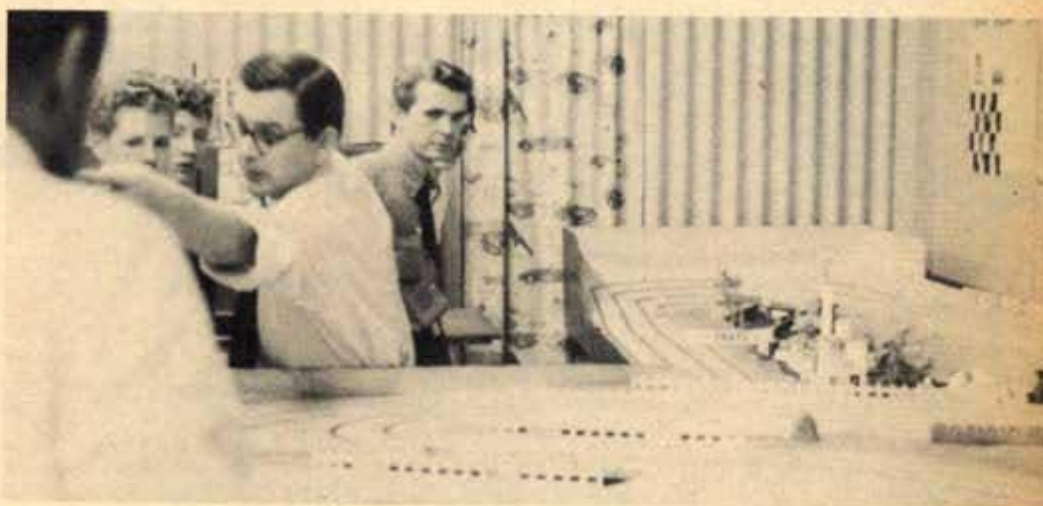
Both clubs and commercial slot tracks have sprung up by the dozens in many communities throughout the nation. A fast, multi-lane, figure-eight or a tricky twisty road course is always sure to attract many hobbyists, young and old alike. Many stores are hard to get into on some evenings as the crowd gathers to watch the weekly road race or elimination drags. In most cases approximately 80% of the lanes are occupied by slot racers who pay the usual fee of 10 cents for 10 minutes or 25 cents for half an hour. The revenue from this alone is just enough to cover the upkeep of the courses, however, the kits and accessories sold provide a very sizeable income for the owner of the store. The sight of little electric cars running in a realistic fashion draws in passers-by and many converts or tyros get their start on a commercial track. Some stores have a rental car that they loan out to newcomers. The thrill of a slot car responding to their thumbs is usually the clincher . . . the newcomer is "hooked" and a sale is made.

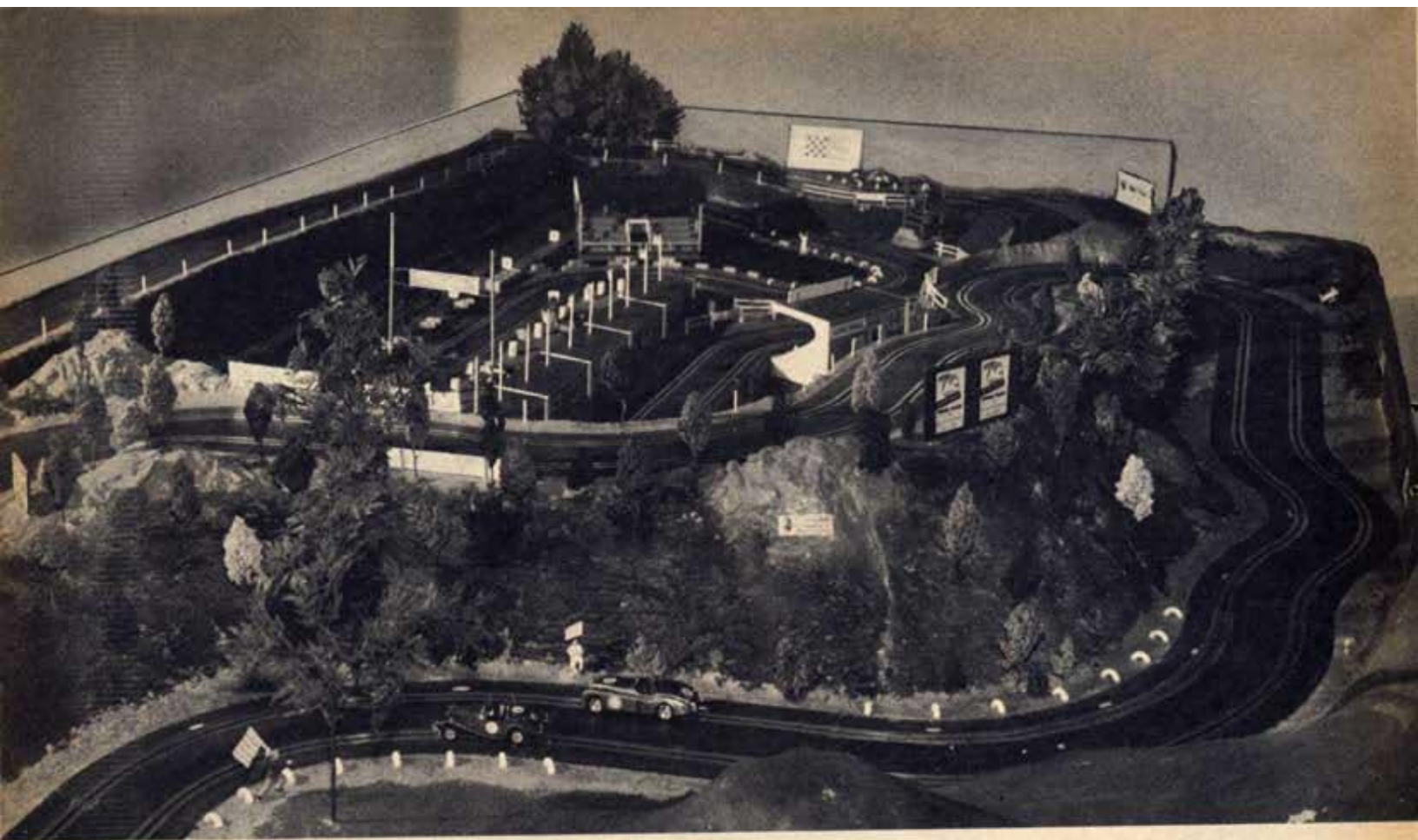
The simplest tracks are no more than slightly enlarged versions of the elementary figure eight or oval course. Lap length is seldom over 15 feet. This type of track is merely a "tune-up course" since drivers get tired of it pretty fast. Except in the case of HO gage tracks, the table top course is rarely a paying proposition.

A more sophisticated course would have a lap length of over 25 feet. At least three lanes are required so if one car crashes out there is still a race between the other two. More than 4 lanes are not too practical due to the space required to accommodate the large radius corners. To accommodate the long course several turns are required, thus it is possible to squeeze a fair size course into a relatively small space.

Some figure-eight and oval courses having up to 12 lanes are popular in large hobby shops. These courses attract speed demons and beginners.

This "medium size" course can have all the usual accessories on it e.g. starting banner, "Finish" sign, pits, haybales, hairpins, grandstand and tunnels. A figure eight arrangement, to equalize the lap distances, is a must as all drivers want to have an equal chance. Word gets around fast about "that inside lane is two car lengths longer than the outside lane." Each lane has to be color coded at





several points along the course to enable corner marshals to find the proper slot. Sufficient railings and escape routes are to be provided to avoid too many crackups and smashed cars. Banked turns help to keep speeds up with a minimum chance of crashouts.

It is best to use automobile batteries for motive power. They can be recharged overnight by conventional battery chargers. The power obtained from car batteries is smooth and non-dependent on line voltage. Even if one car crashes out, the power reaching the other lanes is unchanged, unlike step down transformer types found in commercially available kits. One 12 volt battery has plenty of power to drive up to six lanes. If three six-volt batteries are used, power terminals can be provided for either 12 or 18 volt operation. This arrangement is sure to please the speed enthusiasts.

Timers can be purchased from firms catering to commercial washing machine installations. One enterprising owner we know installed regular home laundry type timers behind the counter of his store. Customers pay to him personally (to the cash register) over the counter. This eliminates

The average young driver looks for speed and speed alone. Scenery, sophisticated courses and the like have little appeal for the speedsters. To accommodate them, a large figure-eight course with up to 10 lanes and banked corners can be built. Timers and power terminals are lined up along one of the straights. Drivers usually stand on a podium which provides good visibility. It is important to provide access to the inside of the turns as do-slotted cars usually roll down here and might be hard to reach. There are usually four terminals beside each timer: Common, 12 Volt, 18 Volt, Brake. Some stores have a far reaching reputation by building a fabulous road course. As an example we should mention the Mille Miglia like course at Western Raceways in Gardena, California. This course has a very long straight which leads into a sharp banked turn, zig-zags and narrowing lanes before it goes through many linked turns, hairpins and loops. There are individual power packs on each of the four lanes, which allow each driver to limit his top speed and/or determine the polarity of his track. Lap counters automatically determine the winner and at the end of the race a light indicates the lane in which the winner is running. There are large scale races organized each week which draw crowds from far and near.

an expensive item when the store is just starting its operations. The same procedure can be used by a club that is short on funds.

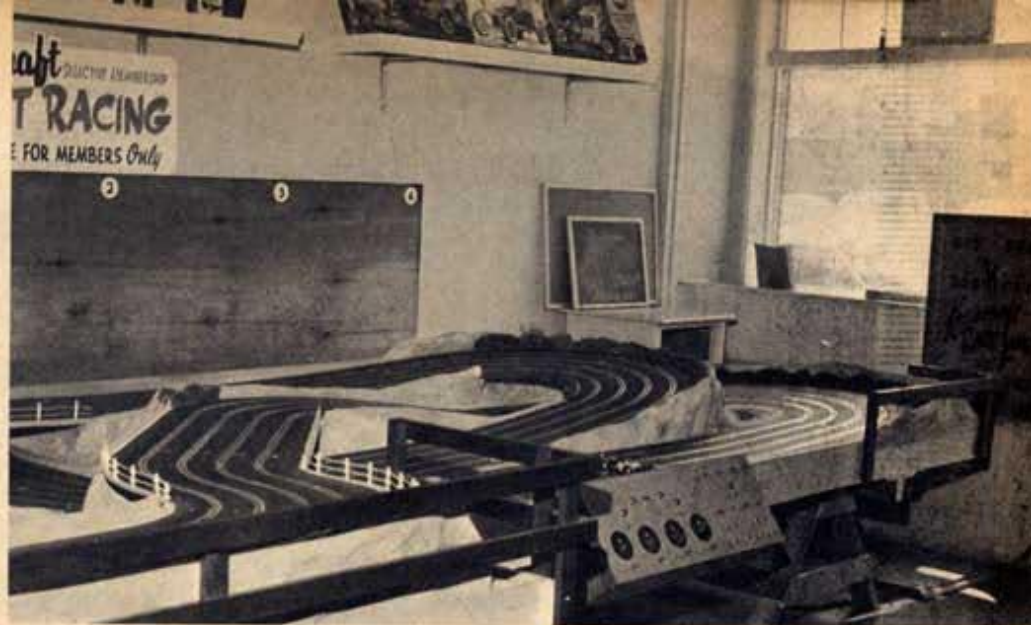
The framework on which these large courses are built is usually made of 2x4's which can be put together by anyone handy with hammer and saw. The tracks are made of particle board or plywood with the slots routed in. Power tapes are either braided tapes or copper strips to provide good electrical connections, minimum voltage drop and minimum maintenance. Scenery is the conventional wire screen with plaster over it, painted.

Plenty of room must be provided around the track for spectators. Drivers should always be provided with separate areas, elevated if at all possible.

A nice touch and much appreciated by racers is a workbench and run-in block. Here the cars can be tuned, repaired and prepared for the run on the track, all at no cost of course.

A bulletin board with notices of swaps is a welcome service by everyone. A late innovation is the used car and equipment department. Here used but good condition equipment is sold, this also provides additional revenue for the club or store.

Sufficient room for operators and spectators should be major factors considered when planning a slot course.



A survey conducted among commercial course owners and club tracks revealed that a multi-lane course may cost anywhere from \$25 up to \$1500 and may take from a couple of days to three months to complete. It has to be rugged to withstand the constant use. It has to be rugged enough to withstand the

constant use. It has to be attractive enough to appeal to the more sophisticated drivers. One of the pet peeves of drivers is "uneven" courses meaning that the slots are not smooth and the tracks are uneven. If a spot on the courses is notorious for de-slotting cars it will quickly become a liability instead of an asset. Every effort has to be made to provide the smoothest possible run for the cars. This applies especially at points where track sections (e.g. plywood panels) meet. An example

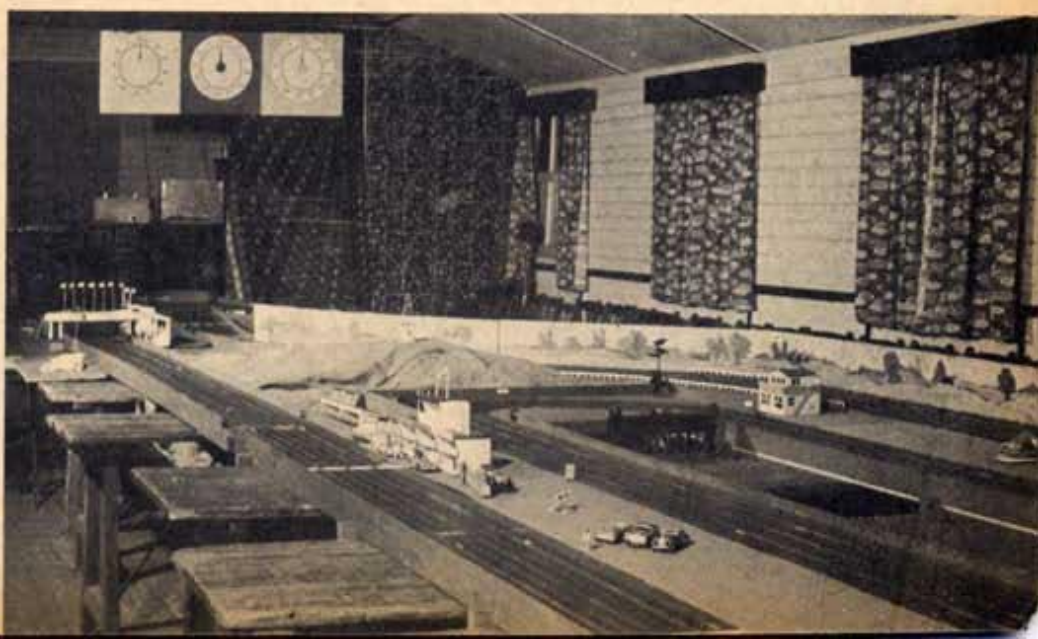
would be the meeting point of straights and banked corners.

The rules of the house should be posted in plain view. Foul language, cars without bodies, ultra low resistance motors, etc., should be outlawed. Rules and regulations for the races should also be displayed so that the competitors can tune their cars and, practice according to prevailing regulations.

Lockers can be provided for a nominal fee for drivers who have no facilities at home for their equipment. Simple repair tools e.g. small screw-drivers, wrenches and machine oil should be available. Trophies of past and coming competitions can be displayed to stimulate more interest.

Races should have plenty of variety: short sprints and elimination races alternated with enduros, LeMans events (drivers line up against a wall and at the drop of the flag run to their positions, attach their controls and start their cars), special events for one-make cars ("Strombecker night"), 1/32 Gp, 1/32 Sports, 1/32 GT, 1/24 Stock, 1/25

Jalopies etc., etc. For a store, one night a week should be designated race night, closed for general public. Events organized by the owner of the store indicate that he is an enthusiast himself which is bound to get drivers to patronize such a store.



Add-on possibilities should also be considered with basic plan.



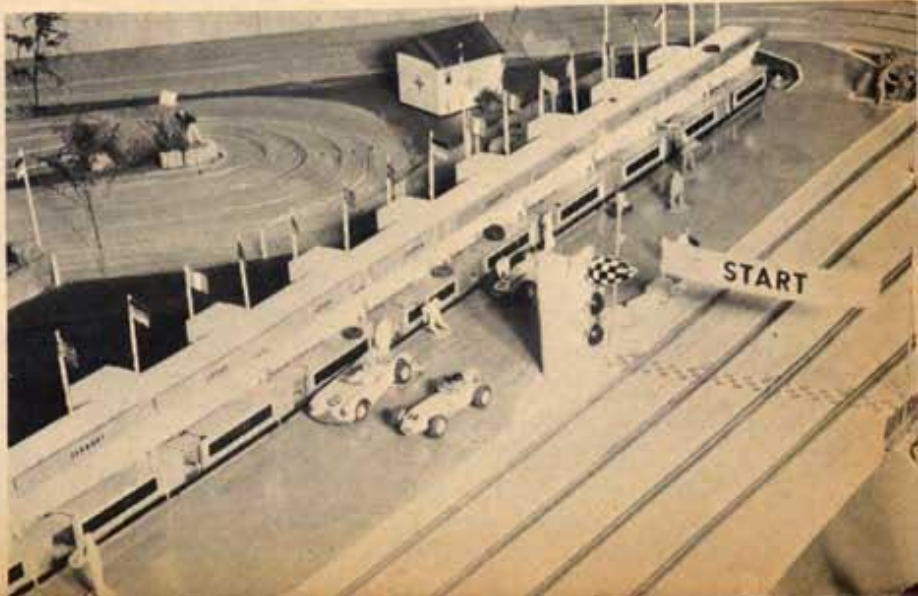
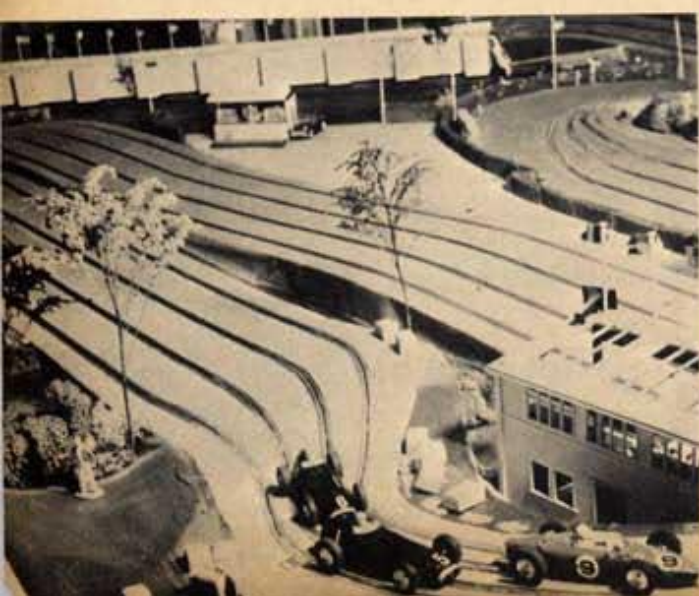
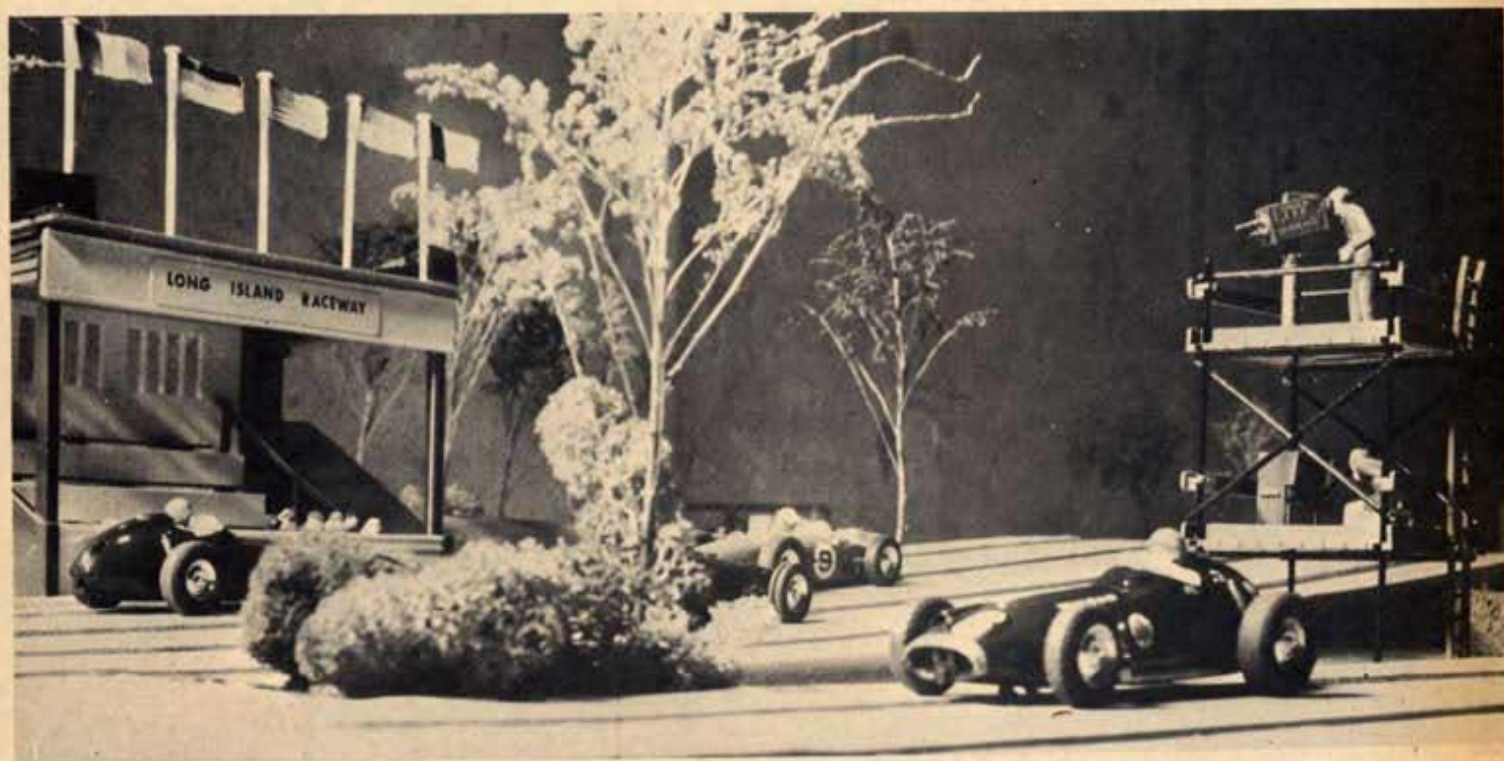
Spotlights: TRACK of the MONTH

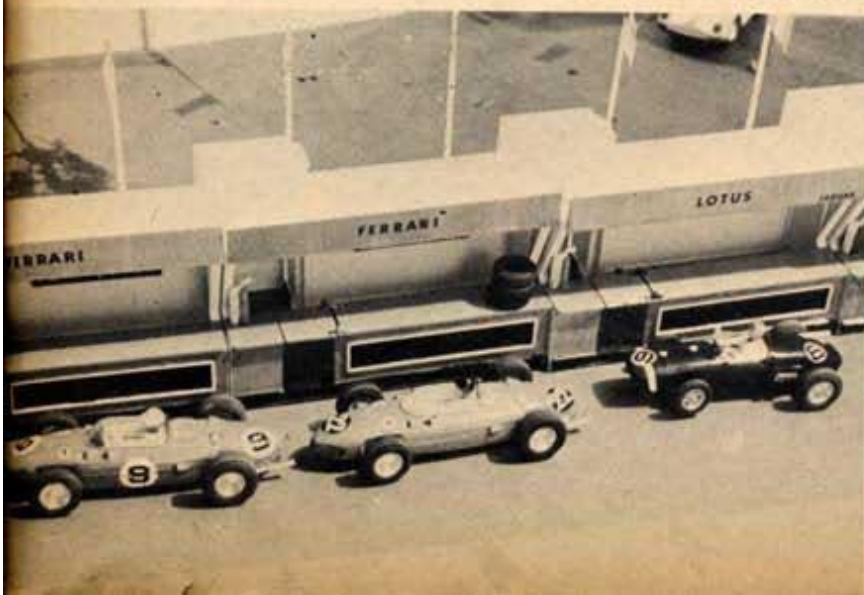
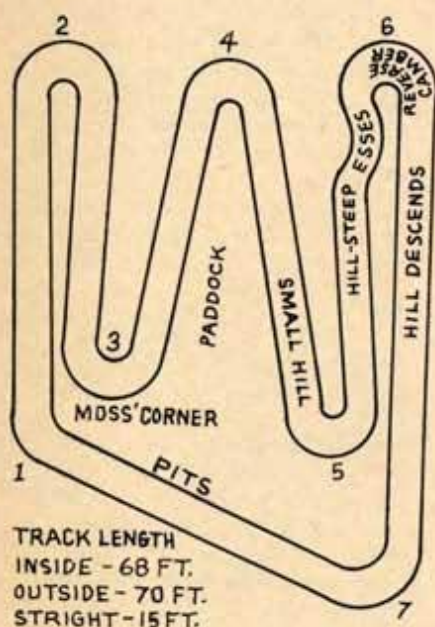
LONG ISLAND RACEWAY CLUB

The Long Island Raceway Club is one of eight well organized slot racing groups in Ottawa, Ontario, Canada. It started just five years ago with three members, an old Scalextric set, old metal cars and a lot of enthusiasm. In those early days of slot racing, the hobby was still so new that competition was almost nil.

In 1960, when things finally started to boom with the coming of new and better slot racing items, they formed with three new members the first organized club in the city.

Later, with a total of twelve members and a comparatively large new track, the group set out to compete with other clubs. Featuring Scalextric and V.I.P. cars for the main events, sports and formula I races are still the favorite of the group. The group didn't omit the hotter cars as competition in city championships across Canada made this necessary.



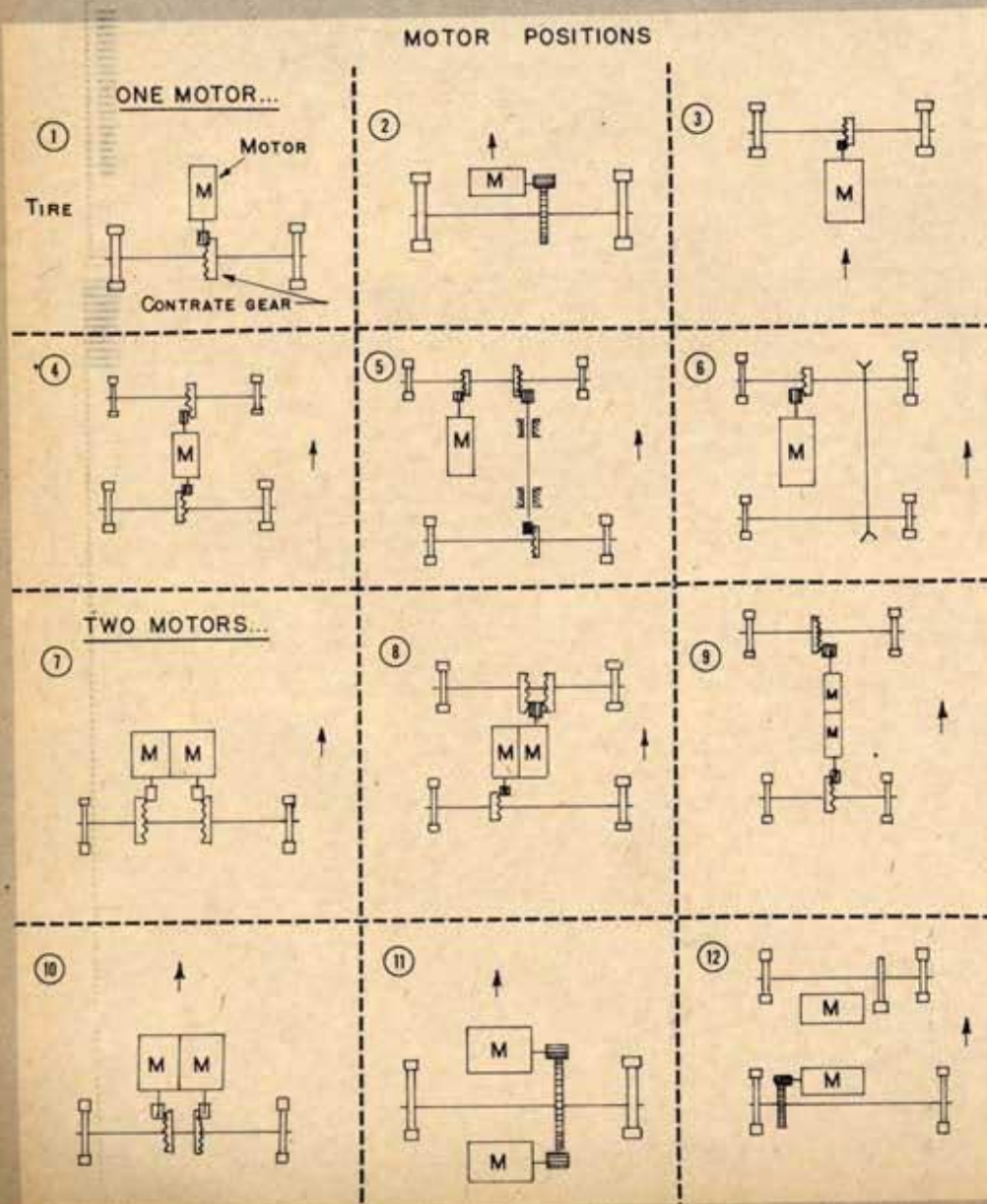


POPULAR MOTOR POSITIONS

A COMPREHENSIVE STUDY OF
STANDARD MOUNTING POSITIONS

By George Siposs

MOTOR POSITIONS



ONE MOTOR

1. This is the most conventional of all motor positions. It uses a pinion (on the motor) and a contrate gear (or bevel gears). This arrangement combines simplicity with reasonable efficiency. This is usually referred to as the "hot dog."
2. This is the well known "sidewinder" or spur gear drive. From an engineering point of view it offers the most efficient power transmission outside of bevel gears. Besides, the motor and gear assembly can be mounted on a chassis easily.
3. Same as #1 but the front wheels are driven. A bit of tuning is required to find the best weight distribution to offset unbalanced torque.
4. A shaft extension is used to drive two contrate gears to achieve a four wheel drive effect. It is best to use a universal joint (rubber tube or spring belt) on one of the shafts.
5. Here the motor drives one axle. A contrate gear on this axle drives a pinion fastened to a jackshaft which in turn drives the other axle. This four-wheel drive is very popular in England.
6. Same as #5 but instead of a jackshaft a rubber belt or O-Ring drives the other axle by means of pulleys.

TWO MOTORS

7. Two motors driving two contrate gears. Note that the two gears are facing each other to completely neutralize motor torque.
8. Two motors side by side to achieve a four-wheel drive effect. The gears are facing the same way to neutralize torque.
9. Two motors end-to-end. This is a double "hot dog," very efficient and popular in dragsters to achieve maximum bite by four-wheel drive.
10. Two motors side by side (same as #7) but gears are mounted close together if little space is available.
11. This is the most efficient method of driving one axle. No torque reaction to worry about, and the spur gear wastes very little power. Make sure that the spur gear is brazed on the axle very securely, and true.
12. Two sidewinders are used here to have four-wheel drive. Using two DC705's this could be an unbeatable combination...

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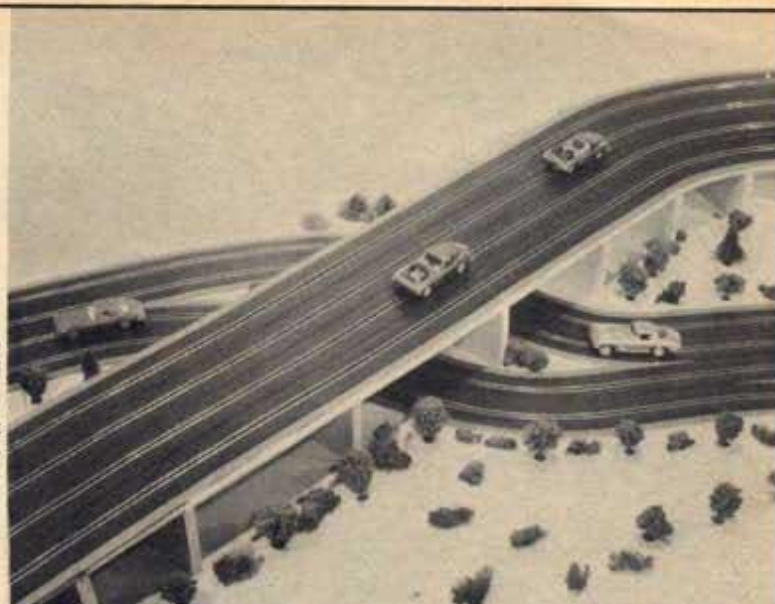
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Obtain a battery rated at 6 volts or so and at least 1/2 amperes. Flashlight batteries are no good and car batteries may be too large, so try a motorcycle battery or several hotshot batteries wired together in parallel to obtain the amperage and four such rows in series to obtain the 6 volts. (Each parallel rows equals 1.5 volts.)

Connect one pole of this battery to one of the control terminals and the other pole to one of your hand control wires. The other hand control wire is left connected to the terminal on the track, in the usual manner. Make sure the polarity is correct or the batteries will oppose each other. When properly connected, your battery voltage will be in addition to the track voltage. For a slight boost, you may use just 1.5 volts or 3 volts in addition to the track power.

Watch out, the guy next to you may have a hidden battery secretly connected in his tool box or coat pocket. You may be racing against higher voltages!



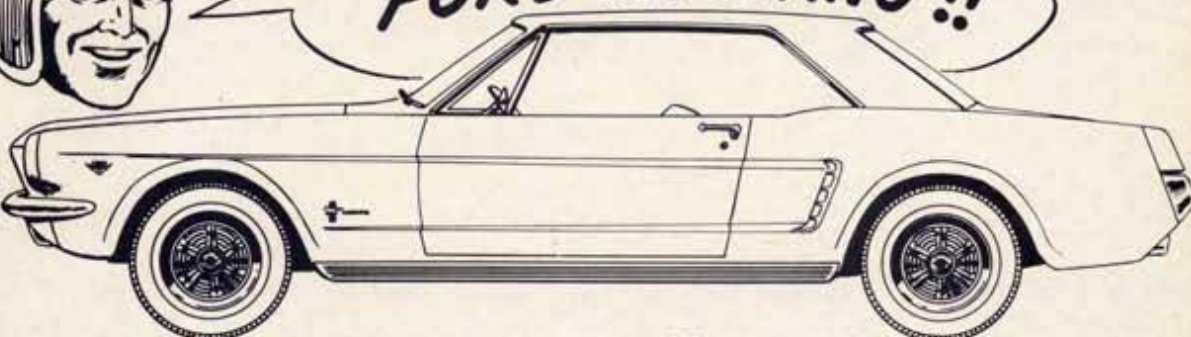
"Golly, Bill — we all put one on backwards now and then!"

FAMOUS RACING DRIVER
GLENN "FIREBALL" ROBERTS
 SAYS



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 CAN WIN A
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Authentic Scale • Superior Quality • Top Performance

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Lightweight METAL MAG WHEELS

Detail and finish never before possible in metal wheels . . . including the smallest lug nuts! Strong, light weight! Fits all popular tires. Deep rims for use with or without glue. Available with 5-40 threads or 1/16 hole for front end wire axles 1/32 and 1/24 scale.



Actual Size

\$.79
per pair

CATALOG NUMBERS

	5-40 Thread	1/16 Hole
1/24 Scale	601	603
1/32 Scale	605	607

REVERSE RIM CUSTOM WHEELS

New low price on reverse rim custom wheels. Deep rims with cross-hatch "positive-tread" tire grip. Fits all popular tires.



Actual Size

\$.49
per pair

CATALOG NUMBERS

	5-40 Thread	1/16 Hole
1/24 Scale	625	626
1/32 Scale	627	628

Realistic KNOCK-OFF NUTS

Add that touch of realism never before possible at a price never before heard of! Tapped for 5-40 axle threads. Available in 2 or 3 prongs. Four per set.



Not to Scale

\$.59 set of four

CATALOG NUMBER
2 Prong 610
3 Prong 614

2 Prong
3 Prong

KNOCK-OFF NUT WRENCH

Fits Dynamic Models' two and three prong nuts. Quick change. Tighten nuts without damage. Fits nuts on either 1/32 or 1/24 scale wheels.



Actual Size

\$.69 each

CATALOG NUMBER 620

PRECISION SLOT RACING AXLES

Actual Size



Hardened and Ground! Superior bearing surface reduces friction for top performance. Extra strength means no bending, misalignment or "scoring" of axles. 5-40 threads on all six popular lengths . . . 1 3/4"-3" (1/4" increments). Eliminates the need for cutting to scale. Two precision jam nuts included with each axle.

Length 1 3/4" to 3"

\$.29 each



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